

LEADERSHIP AND TEAMWORK SKILLS

Law students are generally exposed to the importance of teamwork in moot competitions as well as in accomplishing group work assignments. Some of them may act as lead counsels in moot competitions. Teamwork refers to when a group of individuals put in the effort to achieve a common goal, namely to solve the problem as a team. Teamwork is important chiefly because it makes the difficult task simple and may include activities like sharing information, building relationships, and contributing ideas. These important aspects can best be achieved by organizing several brainstorming sessions with the litigation team (for lawyers) or team members (for mooters). Brainstorming sessions are an opportunity for junior lawyers (as well as junior mooters in moot competition) to gain experience from more experienced seniors, especially in learning how to manage a case prior to trial, and how to argue before a court of law (for junior lawyers) or a panel of moot judges (for mooters), as the case may be. junior lawyers should take advantage to ask their seniors about the evidence needed at trial and how evidence will be led.

A person who is in the position as lead counsel in moot competition or also lead counsel in a real court action is given the opportunity to demonstrate his or her leadership abilities including accountability, calm under great pressure, coaching, decision making, and information gathering. In addition, it also improves interpersonal skills of caring about others' views and collaborating with others in fulfilling a task, and active listening.

WRITING AND DRAFTING SKILLS

One practical skill much needed by lawyers and law students is mastering the technique of writing and drafting legal documents for transactions and for court action. Junior lawyers and law students must learn to master the stylistic way of writing legal documents such as agreements and pleadings. In their early years of practice, junior lawyers are exposed to preparing documents for litigation matters (such as pleadings, notices of applications, and documents for appeal) and contractual documents. It is expected that lawyers are familiar with drafting various types of applications such as follows:

- a) Drafting a notice of application for substituted service
- b) Drafting an application for the renewal of the writ of summons (or originating summons)
- c) Drafting an application for leave to serve a pleading (for example, a statement of claim) out of time
- d) Drafting application for reinstatement of the writ of summons

Drafting these documents can be time-consuming for the inexperienced and must be done vigilantly to ensure that the rights of the parties concerned are safeguarded. For court documents, it is essential to follow the prescribed forms stated in procedural rules (such as the Rules of Court 2012 and the Criminal Procedure Code). In addition, it is advisable to obtain guidance from senior associates and precedents from fellow lawyers as supporting guide to preparing such documents. Currently, lawyers and law students may refer to Atkin's Court Forms Malaysia which is an encyclopaedia of civil litigation forms and procedures. This encyclopaedia provides lawyers and law students with a collection of procedural documents in civil proceedings.

In drafting contracts, it is essential for the lawyer to ensure that the following process has been taken: (1) the clauses of the contract are in line with local laws and rules governing the subject matter of the contract; and (2) The parties have been given the opportunity to discuss with each other, especially on terms that can be mutually agreed.

The type of interpersonal skill involved prior to drafting contractual documents is the ability of the lawyer to interact, communicate, and listen attentively to his client's instructions. One of the lawyer quote state as follows, "As a lawyer, I can assure you that a lot of document drafting is repetitive, involving cutting and pasting from templates. But the best lawyers bring a unique perspective to the process and anticipate clients' problems." (Ro Khanna Quotes, Brainy Quote).

Once the aforesaid matter has been taken, then only the lawyer should begin to draft the necessary document by taking into consideration the details provided by the parties, the general terms and conditions of a typical contract, and the governing law on the subject matter. A checklist of the general terms and conditions of legal documents should be used containing crucial information such as rights, responsibilities, mode of service of documents (including court documents) terms of payment, disclaimers, dispute resolution clauses, warranties, and governing law. Nowadays, legal drafting can be less stressful by using legal drafting tools (such as the Lexis®Clause Intelligence) that enable the analysis and selection from a large bank of clauses, authored by legal experts.

Writing effective legal opinions needs practice. Legal opinions should be tailored according to the client's needs and use plain language so that client can easily understand (Trudeau, 2011). Effective communication of thoughts and ideas is essential for the smooth delivery of the legal system (Miner, 1989). An important essential skill is a skillset in writing legal opinions in an organized and easy-to-understand manner.

CRITICAL THINKING AND STRATEGY SKILLS IN SOLVING ISSUES AND IN GATHERING EVIDENCE

Law students are generally exposed to critical thinking in attempting problem-based questions in examinations and assignments. This is a basic way of training them to analyze intently the facts of a given situation and decide reasonable arguments with the support of relevant case laws. Accordingly, in essentiality, this is one crucial skill a junior lawyer must progress in his career. for ideal usage leading to an effective legal career.

Strategy in handling a litigation case is important. To win his case, a junior lawyer must analyze the evidence provided by his client and strategize an effective plan. Important aspects of what is required to know and do include the mastery and familiarity of the facts, presenting the theory of the case in a logical and persuasive version, conducting in-depth research, finalizing logical and legal arguments with the support of relevant authorities, and the ability to refute his opponent's arguments. Apart from that, the junior lawyer must communicate effectively with the adversary's lawyer whether through letters or teleconversation lawyers. This is especially important in negotiating a settlement on behalf of his or her client.

Junior lawyers must have a comprehensive understanding of the Evidence Act 1950 on important rules such as statements in documents that need not be proved by calling the makers or the need to produce the originals. Essentially, a junior lawyer must learn to identify what are the relevant documents that must be included in the Bundle of Agreed Documents, including documents referred to in the witness statement of a witness and the procedural rules pertaining to the marking of documents as Part A, Part B, and Part C (see O.34, r. 2(b)(c) & (d) Rules of Court 2012.). Essentially, the junior lawyer in his capacity as Plaintiff's counsel shall also identify documents that must be included in the Bundle of Non-Agreed Documents, for documents for which agreement cannot be reached by the parties. These documents shall be in separate bundles & marked as follows: Part B – documents where their authenticity is not disputed but the content is disputed; and Part C – documents where both authenticity and content are disputed (See Order .34, rules (2)(e) RC 2012).

CONCLUSION

Based on the emphasis on the general legal fraternity, this article provides a general overview of the essential skills that need to be mastered by a law student as well as a junior lawyer. This means that a junior lawyer must hone not only practical skills (drafting and advocacy) but also other essential skills to enable him to perform legal analysis, solve cases, advise his clients on legal issues, work independently as well as a team and manage his cases in a professional way. Some of the essential skills for lawyers involve skills relating to communication (advocacy, advising clients, and

gathering evidence), management, teamwork, research, and critical thinking. These essential skills are life-long skills that must be improved by regular practice and by attending professional training and workshop from time to time.

In addition, it is suggested that proper training and continuing legal education must be designed to ensure that junior lawyers in the country are equipped with the necessary essential skills for them to have comparable knowledge and skills with their foreign counterparts.

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AL-BIRUNI (973-1048 AH) AS A PIONEER OF INDOLOGY AND THE SCIENCE OF RELIGIONS

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Abstract

This paper explains how the Persian Muslim scholar Abu al-Raihan Muhammad Bin Ahmad al-Biruni, who lived during the mediaeval Islamic era, played as a role model in the social sciences and humanities, particularly in the study of Indology and religions. It begins with the biography of Al-Biruni, and his thoughts as well as his methods in the study of Indology and religions. Then, it examines his encyclopaedic account of Indology in Arabic which is translated by Edward C. Sachau in two volumes as Al-Biruni's India. Descriptive method and textual approach are used to carry out the investigation of Al-Biruni's teachings and works. It concludes with reflection on his significant pioneering work in the disciplines of comparative religion and Indology.

Keywords: Al-Biruni, Indology, Hinduism, Science of Religion.

INTRODUCTION

Abu al-Raihan Muhammad Ahmad al-Biruni (973-1048 AH) was a prominent Muslim scholar in the Islamic Middle Ages and was well versed in Mathematics, Physics, Astronomy, Natural Sciences, History and Religions. He was fluent in Arabic, Persian, Greek, Hebrew and Sanskrit. Most of his works are in Arabic and Persian. He traveled to Afghanistan and the Indian Subcontinent, and spent a large part of his life there to introduce a'qli and naqli sciences such as Islamic history, tafseer, shariah and Indian and Persian religions to the other parts of the world. Since al-Biruni himself produced an index of his works up until he was about 60 years old, listing his works is quite simple. However, he survived well into his seventies, and since some of his surviving works aren't listed in this index, it is at most an incomplete list. His output adds up 146 titles, with each book averaging around 90 folios. Nearly half of the titles dealt with astronomical and mathematical subjects. Only 22 titles, a very small portion of his work, have been survived, and only about half of those have been published. (Lim & Scheppler, 2016).

Of all of his encyclopedic efforts, his book on Indian culture is by far the most significant. *Taḥqīq mā li-al-hind min maqūlah maqbūlah fī al-‘aqli aw mardhūlah* (Verifying all that the Indians Recount, the Reasonable and the Unreasonable) is the title of this creative work. It includes all the information that al-Biruni could gather about (Indology) India and its sciences, religions, literature, and customs. His only other encyclopaedic work that comes close to competing with it in terms of scope and depth of coverage is *The Chronology of Ancient Nations*, which is devoted to a comprehensive anthropological account of various cultures and even records the mythology of other cultures that were on the verge of extinction. These two manuscripts, when combined, provide the most accurate premodern account of the societies al-Biruni encountered. The latter work, for instance, has the most thorough analysis of the Jewish calendar to date. It is longer than any surviving mediaeval Hebrew source and much more scientifically backed up by research than any previous analysis of this calendar up to that time.

Al-Biruni has produced other scientific works, which could be listed as follows;

1. *The Elements of Astrology: A Manual of Instruction* (كتاب التفهيم لأوائل صناعة (التنجيم).
2. *The Remaining Signs of Past Centuries* (Arabic الأثار الباقية عن القرون الخالية) – A comparison of calendars from many cultures and civilizations that incorporates mathematical, astronomical, and historical data.
3. *The Mas'udi Canon* (Persian قانون مسعودي) – A comprehensive encyclopedia of engineering, geography, and astronomy.
4. *Understanding Astrology* (Arabic التفهيم لصناعة التنجيم) – A book in Arabic and Persian that is written in the form of questions and answers and discusses mathematics and astronomy.
5. *Pharmacy* – About drugs and medications.
6. *Gems* (Arabic الجماهر في معرفة الجواهر) This book is about geology, minerals, and gems.
7. *Astrolabe*.
8. *A historical summary books*.
9. *History of Mahmud of Ghazni and his father*.
10. *History of Khwarezm*. (Khan,1982).

It is obvious that Al-Biruni is committed to doing his investigations and research using a scientific method. He was an anthropologist, philosopher, historian, sociological researcher, mathematician, auditor, analyzer, and interpreter of all he observed. He believed that the information should be accurate in all aspects of social life.

MEANING OF INDOLOGY

The word "Indology" refers to the scientific discipline of India, its people, culture, traditions, languages, and literature. Within Western academies, it is now more frequently referred to as South Asian or Indian studies. In other words, The study of the history, cultures, languages, and literature of Indian subcontinent is known as indology. The terms classical and modern Indology can also be distinguished from one another; the former is primarily concerned with historical languages and sources, whereas the latter takes into account modern India and its socio-political environment.

Al-Biruni made a contribution to indology with his scientific work "Taḥqīq mā li-al-hind min maqūlah maqbūlah fī al-‘aqli aw mardhūlah" (Verifying all that the Indians Recount, the Reasonable and the Unreasonable). It is noteworthy that he used both qualitative and quantitative methods to discuss the fundamentals and basics of Indology, encompassing geography, sociology, anthropology, history, religions, and other disciplines.

METHODS IN THE STUDY OF RELIGIONS AND INDOLOGY

Al-Biruni is one of the most learned Muslims about Indian history and religions. He thoroughly investigated various religions, including the religions of India, Hinduism, Zoroastrianism, Judaism, Christianity, Buddhism, and Islam. In contrast to other scholars, Al-Biruni examined these religions impartially and made an effort to comprehend them in his research. He considered all cultures and communities distantly related because of being a part of humanity. According to Al-Biruni, despite how different they may appear to one another, all cultures are related by a common human element, making them all distant relatives. He used a historical perspective as his initial method of study.

Historical Approach

The basis of historical approach lies in the systematic study of religion as a socio-cultural phenomenon according to the west in the modern era. It is a highly significant approach to study any religion because it has often shaped for civilizations their law and their moral codes (Stausberg & Engler, 2011).

Basically, it reflects how a historian has studied any religion in terms of its themes, sources and ideas. Historians typically focus on particular topics in all over history of religions, in terms of geographical area or of theological doctrines. Al-Biruni's investigation is an example of his deployment of the historical method with all its fundamental techniques. He explores true knowledge about other religions without any interference as a Muslim scholar. As a detailed explanation of his

methodological approaches, he suggests that there are mainly five tools of his method to collect information about Hinduism: - Sanskrit; Its language, religious attitudes, Hindu customs and the general Hindu attitude towards others Al-Biruni first divides the Hindu people into two groups; educated and illiterate Hindus. The educated Hindus he considers Monotheistic, they believe in one God, an eternal deity, omnipotent and eschewing all forms of idol worship. The uneducated Hindus are, according to Al-Biruni, worshippers of multiple idols, yet he points out that even some Muslims (i.e., Jabriyya) have adopted anthropomorphic concepts of God. He considers himself a scholar, dispassionate and un-biased, in the introductory comments on his book:- "This book is not a polemical one. It is nothing but a simple historic record of fact." (Sachau, 2015).

This dispassionate approach is the center of his work, what makes him a distinguished scholar and a religious historian. It is what he prides his work of. An example of this purely dispassionate and educational approach can be seen clearly in his remarks upon Hindu religion as a Muslim:- "I have done and written this book on the doctrine of the Hindus, never making any unfounded imputations against those, our religious antagonists, and at the same time not considering it inconsistent with my duties as a Muslim to quote their own word at full length when I thought they would contribute to elucidate a subject. If the contents of these quotations happen to be utterly heathenish, and the followers of the truth i.e the Muslims find them objectionable, we can only say that such is the belief of the Hindus and that they themselves are the best qualified to defend it." (Sachau, 2015).

Al-Biruni looked down upon all scholars who failed to engage primary sources in their treatment of Hinduism. He found existing sources on the religion both insufficient and dishonest. Guided solely by his sense of ethics and his craving of knowledge, he sought to explain the religious behaviors of all religious groups.

Comparative Approach

Another approach deployed by Al-Biruni is comparison of religions. In this approach, he gives a systematic comparison of doctrines and practices of various religions. This method, in general, leads to a deeper comprehension of the core philosophical issues that underlie religions, such as ethics, metaphysics, and the character and mode of salvation, etc. Studying these disciplines helps us gain a deeper and more comprehensive understanding of how people view and interact with the sacred, numinous, spiritual, and divine. (Kamaruzzaman, 2003).

It is a highly significant approach to understand the world views of other religious communities, their culture, life style and psychology. It is this that Al-Biruni called "True Knowledge of the other religions". *Taḥqīq mā li-al-hind min maqūlah*

maqbulah fī al-‘aqli aw mardhūlah is an example of the utilization of this approach as he compares Hinduism to Islam, Christianity, Judaism and Greek Religions. For instance, he provides a comparison about the Words of confession in these religions: - "As a word of confession, 'There is no God but Mohammed is his Prophet,' is the Shibboleth of Islam, the Trinity that of Christianity and the Institute of Sabbath that of Judaism, so metempsychosis is the Shibboleth of Hinduism. Therefore, he who does not believe in it does not belong in them and is not reckoned as one of them". (Sachau, 2015). Al-Biruni had written *Taḥqīq mā li-al-hind* to give his readers an insight into the general Hindu mindset. To promote constructive dialogues with Hindus, since there were many intricate and obscure subjects which would be perfectly clear had there been more interaction between Muslims and Hindus. Abu-Sahl is one such person who requested Al-Biruni to compile his knowledge about Hinduism as an aid to those who wanted to discuss religious questions with them (or) wanted to associate with them. Therefore, in *Kitab-Ul-Hind*, he made a discourse between Jews, Persians, Christians, pre-Islamic Arab, Sabians in this way. He earned his fame as a pioneer Muslim scholar in the field of comparative study of religion. However, he also had a very noble reason behind the deployment of the Comparative approach; to remove the common misconceptions between adherents of different religions and mainly to promote a friendly relationship between Muslims and Hindus, as well as removing general misconceptions about Hinduism.

Al-Biruni has always had a very crucial insight, careful outlook and an accurate stance in studying religions. 30 Approaches of Al Beruni in Studying Religions in Context. Jefferey (1951), a famous biographer, witnesses these abilities of the scholar in his following statement about Al-Biruni:- "He will place before the readers the theories of Hindus exactly as they are and where there are similar theories among the Greeks or in the teachings of the Christian sects, or the Sufis... as, for example, pantheistic doctrines of the unity of God with his creatures, he will accurately report their theories also for comparison (Jefferey, 1951).

Anthropological Approach

The third approach he applied in his studies of religions is the Anthropological method. This method consists of the study of a particular religion in relation to other social institutions, and the comparison of religious beliefs and practices across cultures. (Peter Connolly, 2004) In the eleventh century, there were two prominent Muslim scientists who could be counted upon as religious anthropologists. One was Ibn Khaldun, a Tunisian scholar, (1332-1406), and the other was Abu al-Raihan al Biruni. Although he is commonly known as a mathematician, astrologer and historian, he is also considered a good anthropologist. Al-Biruni founded this science even before it existed as a discipline, and therefore is considered the first anthropologist. As a scholar who was seeing one of the greatest times of Muslim

period unfolding before him, Al-Biruni concentrated on contemporary anthropological concerns such as caste, the class system, rituals and customs, cultural issue, and women's challenges in an effort to better apply his self-created approach to his research. He employed phenomenological observation, cross-cultural comparison, and intercultural conversation through this contemporary method. These ideas are now widely applied in anthropology.

Al-Biruni, along with giving a deep analysis of the Middle-Eastern folk and the inhabitants of the Mediterranean region, studied the Indian people in detail. He discussed impartially their customs and religions. Being the model anthropologist, He only wrote his books on India after he had spent thirteen (or according to some historians, twenty) years in India, among these people. He himself admitted, that to study the Hindus he became their student, looking on as a silent audience as they went about their day-to-day activities. He watched them as they attended to their religious rituals. He accompanied them as they went to and from their places of worship. He mingled with the general Hindu public with great patience, love for knowledge and unparalleled efforts. He learned their language, culture, religion and their life. He is said to be the Pioneer anthropological Muslim (Nasr, 1968).

Moreover, he never let his personal convictions or the beliefs of his own religion bar him from conveying the beliefs of the Hindus honestly and without any negative sentiment. He was, as a scholar, empathizing and neutral, with unbiased conclusions of his studies. The anthropological approach helped him in the interpretation of social, philosophical and religious issues of Hinduism, stating his own opinion without committing or intending to commit any offence towards the believers of Hinduism. For instance, when addressing the issue of idol worship, he writes: - "It is well known that the popular mind leans towards the sensible word, and has an aversion to the world of abstract thought which is only understood by highly educated people, of whom in every time and every place there are only few." (Sachau, 2015). He then notes: - "... if for example, a picture of the Prophet was made, or of Makkah and the Ka'aba, and were shown to some uneducated men or women, their joy in seeing the picture would bring them to kiss it, to rub their cheeks against it... As if they were seeing not the picture but the original, and were in this way as if they were present in the holy places, performing the rites of pilgrimage, the great and the small ones... (Sachau, 2015). Thus, Al-Biruni tried to present a true picture of Hindu religion, its tradition and concepts for the Muslim world, to develop a positive and constructive relationship between the two communities.

The critical perspective with which Al-Biruni presented his ideas revealed his extensive knowledge and mastery of the various parts of applied research, particularly in Indology and study of religions, as well as his desire to go beyond

simple research and investigation and concentrate on putting the information and results into practice so they can be used effectively.

DISCUSSION

Indology And Al-Biruni's Scientific Works

Al-Biruni travelled to many places throughout India for his analytical work (تحقيق ما (للهند من مقولة مقبولة في العقل أم مردولة). which Edward C. Sachau translated as "AlBeruni's India" in two volumes. Al-Biruni presented his extensive analysis of Indology in this work. (An account of Indian religions, philosophy, literature, geography, history, chronology, astronomy, customs, laws, and astrology up as of the year 1030 AD). He translated a number of Sanskrit works into Arabic such as selections from Patañjali's Yogasūtras, the Bhagavad Gīta, Upanishads and Puranas (Khan,2001).

Al-Biruni's India is authored in Arabic and is divided into 80 chapters that cover a wide range of topics, including Indian metrology, legislation, festivals, astronomy, alchemy, measurement techniques, iconography, and customs and manners. Al-Biruni used a certain format for each chapter, starting with an enquiry, then moving on to a description based on Sanskrit teachings, and then concluding with a comparison to other cultures.

He presented numerous studies on the peoples of the Indian Peninsula (Indology) in his scholarly works. "The Remaining Signs of Past Centuries", also known as "Chronology of Past Ancient Nations" (Kitāb al-āthār al-bāqiyah `an al-qurūn al-khāliyah), is another systematic book by Al-Biruni that investigates Indology and the study of religions. It is a comparative study of various cultures and civilizations that explores the traditions and ideologies of various peoples around the world, especially India. It also weaves together mathematical, astronomical, and historical facts. The Hindu calendar was one of the particular aspects of Indian religions that Al-Biruni examined in this book. He developed a mechanism for converting Hindu calendar dates to those of the Greek, Arab/Muslim, and Persian calendars, three of which were widely utilized by the Islamic countries of his day.

The Yoga Sutras of Patanjali, is one more authentic work of Al-Biruni in the areas of Indology and study of Hinduism. Millions of yoga students and practitioners throughout the world still consider it as their primary source of knowledge on Hindu philosophy of Yoga. The Yoga Sutras of Patanjali, according to Hindus, deals with the philosophy and practice of Yoga as well as the psychological issue of the liberation of the soul from attachments. Using his knowledge of Sanskrit, Al-Buruni produced this work in a question-and-answer format. In this academic work, al-Biruni presents the several historical variants of the Yoga Sutras since they are crucial for the study of

yoga. This work is regarded as the first translation from Sanskrit. As an Arabic text, it also has special significance in Islamic studies.

He was considered "the first human scientist" and "one of the very greatest minds of Islam, and, all considered, one of the greatest of all times" as defined by the Belgian historian George Sarton for his thorough research and studies in the human and social sciences, including Indology and the study of religions. (Sarton, 1927).

As Professor Annemaria Schimmel (1992) affirms, Al-Biruni's *Book, India*, is believed to take the pride as the first objective book ever written on the history of religion. Moreover, Lawrence (1976) states that Al-Biruni's view on Hinduism was more informative compared to the other Muslim authors of Arabic books on sects and religions. For example, Al-Shahrastani (d. 1153), allocated only a few pages for Hinduism in his work *al-Milal wa al-Nihal*.

Al-Biruni's works on Indology were not polemical or apologetic. He was only interested in stating the facts as they are presented by the Hindus themselves. He says that he shall not produce the arguments of his antagonists in order to refute such of them, as he believes to be in the wrong. He further adds that his book is nothing but a simple historic record of facts. And he shall place before the reader the theories of the Hindus exactly as they are, and he shall mention in connection with them similar theories of the Greeks in order to show the relationship existing between them (Sachu, 2015).

Additionally, he basically presented the phenomena he wanted to examine in Indian civilization and culture in the way that he had personally experienced them, then went on to analyse and interpret them and draw analogies between what he had witnessed and its analogue in other cultures, particularly Arab, Persian, and Greek.

CONCLUSION

Al-Biruni is well known for his contributions to the natural sciences, but his vital work in Indology and the study of religions, particularly Hinduism, cannot be overwhelmed by his other achievements. In fact, he should be called as the best representative of the pioneers who initiated Indology and the comparative study of religious traditions. Moreover, the intellectual world will remember him as great comparative religionist due to his scrupulous and objective research that served as a big boost in the methodological aspects of comparative religion. An accurate man, a

neutral scholar, a hard worker and a craving student, Al-Biruni was an exemplary figure for all those who study religions and comparative religions.

He is a creative thinker who carefully gathered a significant amount of data about other religions, providing the Muslim world with accurate knowledge of their ideologies. His approaches were applied by the west in its studies. His special and profound result in Indology and Hinduism enabled him to compare this religion with other religions like Greek and Islam. He opened a new horizon of knowledge for human thought to search the reality. He was a scholar with multi-dimensional knowledge that was of encyclopedic magnitude. By using the anthropological approach, he was able to objectively study Hinduism, despite the fact that this religion's beliefs are contradictory to his own doctrine. His use of the comparative method also served a beneficial mean for enhancing cross-cultural understanding.

The comprehensive empirical methods used by Al-Biruni demonstrate that he was, in fact, a pioneer in the fields of Indology and comparative religions. His commitment to objectivity is still a difficult strategy since it requires such a high level of honesty, correctness, and impartiality.

Finally, Al-Biruni's crucial contribution to comparative study of religion, especially Indology and Hinduism as a role model for human and social sciences shows that inter-disciplinary studies such as studying religion, culture and society can lead to very original research, positive and constructive relationships between different communities that can lead to healthy interfaith dialogue, religious harmony and peaceful co-existence.

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ANTIOXIDANT FRUITS AND VEGETABLES IN THE DIET OF MAKKAN SOCIETY IN 609-622 A.D.

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Abstract

The purpose of this paper was to analyze antioxidant fruits and vegetables in the diet of Makkan society in 609-622 A.D. Muslims believe that during these years, their Prophet, Prophet Muhammad, dwelled in Makkah with the Makkan society. Makkan society and other societies of the world in recent times were reported to have a depraved and unhealthy diet. This paper focuses on the Makkan diet to understand a well-balanced diet as an exemplary dietary model for societies worldwide. This study is a qualitative study and the approach is content analysis. Data collected through content and document analysis are thematically analyzed using descriptive and analytical methods. Findings demonstrate that grape, fig, olive, pomegranate, jujube, banana and pumpkin were among the familiar types of fruits and vegetables in Makkah and the Quranic ayāhs on them represent a range of themes. The implication of this study establishes that the fruits and vegetables in the diet of Makkan society contain beneficial antioxidant compounds. Thus, the intake of these antioxidant fruits and vegetables is recommended in the daily diet because they serve as the best food types owing to their health benefits and palatability.

Keywords: Antioxidant, Makkah, Dietary Pattern, Fruit, Vegetable.

INTRODUCTION

Diets consumed by specific populations have been a subject of interest since antiquity. The traditional Mediterranean diet is one of the most well-known and nutritious diets. It originates in the food cultures of ancient civilizations which developed around the Mediterranean Basin. It is based on a daily intake of olive oil (as the primary source of added fat), plant foods (cereals, fruits, vegetables, legumes, tree nuts, and seeds), moderate consumption of fish, poultry and dairy and low-to-moderate alcohol (primarily red wine) consumption, all of which are balanced by a comparatively small intake of red meat and other meat products (Lăcătușu et al. 2019). Substantial research supports the very great health benefits of such dietary patterns (Nestle 1995). The Mediterranean diet has lower cardiovascular disease rates (CVD) (Berry et al. 2011).

The Western diet can be traced back to the United States and other Western countries. It contains a high intake of processed refined grains, refined sugars, refined vegetable oils, salt and fatty meat. These diet-related chronic diseases (cancer,

coronary heart disease (CHD), hypertension and type 2 diabetes) represent the single most significant cause of morbidity and mortality (Loren Cordain et al. 2005). Diets in Saudi Arabia have changed rapidly in recent years as the Western diet has supplanted the conventional Arabic diet (Washi & Ageib 2010).

Numerous studies have suggested that climate variability and temperature can adversely impact global food production (Iizumi & Ramankutty 2015). Prophet Muhammad dwelled in Makkah for 13 years after his prophecy before he migrated to Madinah (Al-Buti 2003). Makkan society during those 13 years from 609 A.D. until 622 A.D. was identified as Makkan society and they had their dietary habits.

Diet produces macronutrients (carbohydrates, proteins and fats), micronutrients (vitamins and minerals) and phytochemicals (non-nutrient bioactive compounds) (Shondelmyer et al. 2018). Antioxidants, compounds that can scavenge free radicals from the human body (Bharti & Ahuja 2012), are found within carbohydrates, protein, vitamins, minerals, dietary fibers and phytochemicals (Al-Mustafa & Al-Thunibat 2008). Antioxidants in phytochemicals (such as polyphenols, flavonoids, carotenoids, tocopherols and ascorbic acid) play a crucial role in protecting against numerous disorders such as cancer, cardiovascular diseases, inflammation, cataracts, diabetes and aging (El-Bakry et al. 2013).

BACKGROUND OF THE STUDY AND PREVIOUS STUDIES

Knowledge of ancient diets must be inferred from whatever evidence is available such as written records and other evidence, such as documented archaeologic records of food debris and food-related art, pottery, tools and inscribed tablets (Nestle 1995). For Makkan society diet, the written records are abundant, including the Quran and the Sunnah. The Quran has introduced various foods in different *āyahs* (Ranjbar et al. 2013). In Sunnah, a variety of foods, for example, dates were recorded in various chapters of *ḥadīth* book; *kitāb al-Aṭ'imah*, *kitāb al-Maghāzī*, *kitāb al-Riqāq* and *kitāb al-Ṭiṣām bi-al-Kitāb wa al-Sunnah* (Al-Bukhari 2001). As a result, a considerable amount of literature has been written on fruits, vegetables, grains and other dietary sources since the very beginning.

During the middle centuries, much literature was written by previous scholars on prophetic medicine and *aḥadith* on plants. Scholars have depended on the two primary sources: the Quran and the Sunnah, to document the variety of foods from plants and animals. For example, Abdul Malik bin Habib al-Andalusi (238H/853M): *Al-Ṭibb al-Nabawi*, Abu Bakr Muḥd b. Zakaria al-Rāzī (313H/926M): *Al-Ṭibb al-Mulūkī* and *al-Ḥāwī fi al-Ṭibb*, Abu Bakr Ahmad b. Muḥd al-Dainuri Ibn Sunni (363H/973M): *Al-Ṭibb al-Nabawi*, Ibn Sina (428H/1037M): *Al-Qānun fi al-Ṭibb*, Abu Nuaim al-Asbahani (430H/1038M): *Al-Ṭibb al-Nabawi*, Abu al-Abbas Jaa'far al-Mustaghfiri (432H/1041M):

Al-Ṭibb al-Nabawi, Abdul Latif al-Baghdadi (629H/1232M): *Al-Ṭibb min al-Kitāb wa al-Sunnah*, Diya' al-Din Muhd b. Abdul Wahid al-Maqdisi (646H/1248M): *Al-Ṭibb al-Nabawi*, Ibn Baitar (646H/1248M): *Tuḥfah Ibn al-Baitār fi al-'Ilāj bi al-A'shāb wa al-Nabātāt*, Ibn Nafis (687H/1288M): *Al-Mūjaz fi Al-Ṭibb*, Al-Turkimani (694H/1295): *Al-Mu'tamad fi al-Adwiyah al-Mufradah*, Muhammad Syamsuddin al-Zahabi (748H/1348M): *Al-Ṭibb al-Nabawi*, Ibn Qayyim al-Jauziyah (751H/1351M): *Al-Ṭibb al-Nabawi*, Jalaluddin b. Abu Bakar al-Suyuti (911H/1505M): *Al-Manhaj al-Sāwī wa al-Minhal al-Rāwī fi al-Ṭibb al-Nabawi* and many more (Al-Turki 2006). Scholars in this period only focused on collecting the Quranic *āyahs* and *aḥādīth* on plants or prophetic medicine and they have not treated the antioxidants in the diet of society even though all these dietary sources contain antioxidants.

METHODOLOGY

This study is a qualitative study and the approach is content analysis. Data were collected through content and document analysis. The content of the Quran was studied to collect the Quranic *āyahs* on antioxidant foods in *makkiyah* context. For validity and reliability, the Quranic content was reviewed in two formats: electronic and hard copy, to ensure the smooth process of gathering the Quranic *āyahs*, and to compare and improve the exactness and accuracy of each finding. The electronic form of the Quran is from the website (<https://quranenc.com/>) and *Al-Maktabah al-Syāmilah* software.

Specific keywords were keyed in *Al-Maktabah al-Syāmilah* to collect Quranic *āyahs* on foods. This study focuses only on *makkiyyah āyahs* and selected *aḥādīth* books such as *Ṣaḥīḥ Al-Bukhārī*. Some examples of significant keywords for Quranic *āyahs* are as follows: fruits (*sidr*, *sidrah*, *al-sidrah*, *ṭalḥ*, *ukuluhā dāim*, *al-a'nāb*, *a'nāb*, *al-zaitūn*, *zaitūn*, *rummān*, *al-rūmman*,) and vegetables (*raiḥān* and *al-raiḥān*). Data were analyzed thematically. The Arabic words are italicized and transliterated.

RESULTS AND DISCUSSION

Only certain narrations in the Makkan period describe food. Most narrations on food were narrated in the *madaniyyah* context. The history of the Makkan period had not been compiled in detail as the *madani* period. However, the Quranic *āyahs* on the antioxidants in the *makkiyyah* context demonstrate that numerous antioxidants existed in Makkah because they served as the most crucial proof of the power of the Creator and the Oneness of God (*al-tauḥīd*).

As the antioxidants in the Quran are stated mostly in the *makkiyyah* context, it is crucial to perceive the geographical location of Makkah, its surroundings and factors that contribute to the food in Makkah. The Quran reveals the dietary habits of Makkan

people by indicating that they enjoyed many types of food, including cereals such as barley and wheat, meat and milk of livestock, honey, various types of fruits such as dates, grapes, fig, olives and pomegranates.

CONTRIBUTING FACTORS TO THE EXISTENCE OF THE FOOD IN MAKKAH

Makkah was rich with fruits because it is located in a strategic location. Historically, Makkah is a barren land without inhabitants, food and even water. The story of Prophet Ibrahim, his wife, Hajar and their son illustrates this reality. Al-A'zami (n.d.) describes this story:

“Prophet Ibrahim brought Hajar and Prophet Ismail to the barren land of Makkah, to a harsh sun-beaten valley bereft of inhabitants, food and even water.”

Although Makkah is a barren land, Makkah is situated in a very strategic location in the Arabian Peninsula, near the crossroads of three continents. Bordered by the Red Sea to the west, the Persian Gulf to the east, the Indian Ocean to the south and Syria and Mesopotamia to the north. Due to this factor, Makkah eventually became a central junction on the trade routes to other countries such as Syam (present-day Syria, Jordan and Lebanon), Yaman, Taif and Najd (Al-A'zami n.d.).

Makkah was an access way for business between Yaman and Syam (Ali 2001). The business caravans had a strong relationship with the Arab tribes from al-Furat to Yaman (Hayad 1985). Yamamah had a strong relationship with Makkah. Yamamah exported wheat and dates to Makkah and other places in Hijaz (Ibn Saad 1990). Khaibar was rich with dates and grains such as wheat and barley and exported this food to the neighbouring areas (Al-Waqidi 1989).

Makkah imported wheat, grains, butter oil and honey from Surrah and Taif (Al-Azraqi 2003). Taif is situated near Makkah and was famous for fruits and vegetables; hence, it exported fruits such as raisins, grapes and sauces such as vinegar to Makkah (Ibn Hauqal 1938). Taif was well-known for raisin products and had the most excellent quality (Mahmud Al-Qazwini n.d.). Raisins from Taif were one of the business products of Quraish (Al-Waqidi 1989). Most Muslim geographers explained that Taif was the vital source for most fruits and raisins (Mahmud Al-Qazwini n.d.). The fruit products reached the famous cities in Hijaz and most fruits in Makkah were from Taif (Al-Maqdisi Al-Basyari 1991).

Another factor that helped Makkah to receive numerous types of food from other places was the role of Jeddah as a medium for sea transportation to connect to other places such as Egypt, Yaman and Habsyah (Al-Waqidi 1989). Yaman connected to other places by depending on the sea terminals and the most well-known terminal

was Aden (Al-Maqdisi Al-Basyari 1991). This seaport played a crucial role in bringing goods to Yaman from other countries such as India, China, Habsyah, Persian and Iraq (Mahmud Al-Qazwini n.d.). Yaman, certain parts in the eastern Arabian Peninsula and Yamamah benefited from Sohar, a port city in Oman (Al-Maqdisi Al-Basyari 1991).

The Quran illustrates an aspect of the business intercourse between Hijaz and other sub-territories in the Arabian Peninsula by pointing out the journey during the winter and summer in *āyah* 2 Sūrah Quraish. It was known that this business journey headed to Syam during summer while headed to Yaman during winter (Al-Waqidi 1989). Al-Mubarakfuri (1996) states that it was a peak time for the Makkan trade caravans to leave for Syria when summer approached and during winter, they headed to Abyssinia (Ethiopia).

The Quraish tribe had relationships and agreements with neighbour countries such as Habsyah, Yaman, Iraq, Persian and Syam (Al-Tabari 1967). This relationship allowed them to connect to other places around those countries and boosted their business partnership with them. Most of them travelled to Persian or Syam and brought back various goods from Syam, for instance, weapons and food, while sugar and honey from Persian (Al-Waqidi 1989).

Owing to these contributing factors; strategic location (the city-state), Baitul Haram became the focal place of people, business trade with other neighbouring countries with the help of Jeddah seaport and agreements with the neighbouring countries thus, Makkah welcomed people who either sought to attend fairs, perform pilgrimage or pass through with their caravans. As a result, Makkah flourished with many food sources from other places.

FRUITS

Grape contains antioxidant compounds such as phenolic compounds which include anthocyanin, flavonol, stilbene (resveratrol), phenolic acids and phytochemicals such as anthocyanine and polyphenols (Nebeling 2002). Grape seeds and skins contain catechins, epicatechins, phenolic acids, proanthocyanidins and resveratrol, all of which contribute to their antioxidative activity (Brewer 2011). Proanthocyanidins available in the grape seed have antioxidant properties and the effect of this material on some diseases such as cardiovascular and kidney illnesses have been surveyed in some studies (Saki et al. 2014).

Grape juice and extracts contain proanthocyanidins and flavan-3-ols (Heneman & Zidenberg-Cherr 2008). Grape juice contains flavonoids, anthocyanidins and nucleic acids, while its skin and seed have quercetin, which inhibits LDL oxidation and platelet aggregation that assists in cardiovascular protection (Ranjbar et al. 2013).

Anthocyanins, leucoanthocyanins and other polyphenols have been demonstrated to have significant antioxidant properties, which can also benefit wound healing progression (Kahrizi et al., 2012).

Sūrah al-Isrā' 17:91, Sūrah al-Kahf 18:32, Sūrah al-Ra'd 13:4, Sūrah al-Mukminūn 23:19, Sūrah Yāsīn 36:34, Sūrah al-An'ām 6:99, Sūrah al-Naḥl 16:11, Sūrah al-Naḥl 16:67 and Sūrah 'Abasa 80:28 depict fruits such as grapes. Sūrah al-Nabā' 78:32 describes grapes that await God-fearing in paradise; those who believed in the revelation understood that, after all, they had to render their deeds (Maududi n.d.).

Olive contains oleuropein, ligstroside, hydroxytyrosol, tyrosol and luteolin-7-O-b-D-glucoside. The healing power of olive oil comes from its high antioxidant activity coupled with high levels of mono-unsaturated fatty acids in addition to its biocompatibility and digestibility (Sheikh 2016). Olive fruits, their oil and leaves play a vital role in the management of various diseases due to the presence of simple phenol (hydroxytyrosol, tyrosol), polyphenols (oleuropein glucoside) and other constituents secoiridoids (S.I.D.); the dialdehydic form of oleuropein. Oleuropein is a powerful antioxidant, anti-angiogenic agent, a potent anti-tumor agent and cancer-protective effects. Oleuropein, hydroxytyrosol and squalene demonstrated a role in skin protection against U.V. light and radiation. Oleuropein has a direct antioxidant action on the skin and shows free radical scavengers at the skin level (Rahmani et al. 2014).

Olive oil is a rich source of polyphenols and powerful antioxidants and plays a role in promoting good health (Rahmani et al. 2014). Polyphenols in olive leaves, olives, virgin olive oil and olive mill waste are potent antioxidants (Barbaro et al. 2014). Polyphenols of olive leaf play a vital role in delaying the progression of advanced glycation end products-mediated inflammatory diseases such as diabetes (Rahmani et al. 2014). A diet high in olive oil is particularly beneficial to increase high-density lipoprotein cholesterol levels (HDL), a protective agent against atherosclerosis and ischemic heart disease and increased intake of olive oil increases HDL level (Ahmad et al. 2009).

Sūrah al-An'ām 6:99, Sūrah al-Naḥl 6:141 and Sūrah Al-Naḥl 16:11 describe fruits such as olives. Scholars have two main views on the meaning of *al-tīn* and *al-zaitūn* in Sūrah al-Tīn 95:1. The first opinion is that *al-tīn* and *al-zaitūn* refer to the fruit itself. *Al-tīn* implies the fig that people eat and *al-zaitūn* denotes the olives that produce oil (Al-Sa'di 2000). This is the opinion of Ibn Abbas, al-Hassan, Mujahid, Ibrahim, Aṭa' bin Abi Rabah, Muqatil and al-Kalbi (Al-Baghawi 1999).

The second opinion views *al-tīn* and *al-zaitūn* as places. *Al-tīn* implies mountain in Damsyiq, according to the opinion of Qatadah and *al-zaitūn* denotes mountain in Baitul Maqdis because the two fruits grow in the two mountains. The two fruits refer

to two mosques in Syam, according to the opinion of al-Dahak. Ibn Zaid views *al-tīn* as a mosque in Damsyiq and *al-zaitūn* as a mosque in Baitul Maqdis (Al-Baghawi 1999). All these opinions point out several places such as Damsyiq, Syam and Baitul Maqdis.

This article holds the view that *al-tīn* and *al-zaitūn* in the *āyah* refer to the fig and olives as well as their habitat or places where they grow abundantly (Syam, which includes Palestine). Scholars have elucidated the uses and benefits of the two fruits and numerous studies have revealed their virtues and qualities. Thus, the first opinion that views the two terms (*al-tīn* and *al-zaitūn*) as fruit cannot be overlooked.

The second opinion also cannot be ignored because there was a common practice among the Arabs that they named a land after the name of the fruit, which grows abundantly in that place. Thus, the meaning of *al-tīn* and *al-zaitūn* can be the land where these two fruits grow and they are the land of Syria, including Palestine. These two places were well-known places to the Arabs during the Prophet's time for the growth of fig and olive (Maududi n.d.). Al-Zamakhsyari (1987) and Al-Alusi (1994) have adopted this explanation.

Olive oil is another type of antioxidant portrayed in Sūrah al-Mukminūn 23:20. The *āyah* illustrates that this olive tree grows on Mount Sinai, produces oil, and is eaten as food (Maududi n.d.). The *āyah* characterizes that food can be dipped with olive oil to intensify the taste (Jalal Al-Din, M & Jalal Al-Din 2000). The olive tree is a vital product of the Mediterranean Sea areas and certain olive trees in Palestine have existed since the time of Prophet Isa. The *āyah* specifically points out Mount Sinai due to the possibility that it is the original habitat of the olive tree (Maududi n.d.). Olives are also stated in Sūrah 'Abasa 80:29.

Figs are an excellent source of phenolic compounds and present a high antioxidant activity. Dried fig is one of the foods with the highest content of polyphenols and these compounds can enrich the plasma lipoproteins and protect them from oxidation (Bachir Bey et al. 2014). Different nutrients, especially antioxidants in fig, made it a protective and preventive agent against oxidative stress (Amjadi et al. 2014). Leaves and fruits of fig are rich in phenolics, organic acids, coumarin, fatty acid, polyphenol and flavonoid. Most of the dark-fruited fig trees produce psoralen and bergapten more than the green ones. Extracts of dark varieties showed higher contents of phytochemicals (polyphenols, flavonoids and anthocyanin) compared to light coloured varieties (Rameshrad et al. 2015).

Pomegranate contains polyphenolic flavonoids and its juice has antioxidants and rich in punicalagin polyphenols (De Nigris et al. 2007). The major phytochemicals in pomegranate are polyphenols, flavonoids, condensed tannins and hydrolysable tannins. Hydrolysable tannins are predominant polyphenols in pomegranate juice and

account for 92% of its antioxidant activity. Pomegranate seeds are rich in sugars, polyunsaturated (n-3) fatty acids, vitamins, polysaccharides, polyphenols and minerals and have high antioxidant activity (Ahmad et al 2009).

Sūrah al-Raḥmān 55:52, 68 portrays fruit as a reward for everyone who dreads to stand before his Lord. They will be rewarded with two kinds of every fruit as stated in Sūrah al-Raḥmān 55:52. According to Maududi (n.d.), this reward indicates two meanings; first: the fruits in the two gardens of the paradise will have their unique flavours and tastes. In one garden, there will be one kind of fruit and in the other, another kind. Second: in each garden, there will be two kinds of fruit; one kind is a familiar fruit on earth and the other kind is never tasted before. Sūrah al-Raḥmān 55:68 describes another reward of the two gardens in which there will be plenty of fruits and pomegranates among them (Maududi n.d.).

Another antioxidant plant that the Prophet knows is jujube. A *ḥadīth* narrated by Malik bin Sasa describes the event of *Isrā' al-Mi'rāj*: Then I was shown Sidrah al Muntaha (i.e. a tree in the seventh heaven) and I saw its Nabk fruits which resembled the clay jugs of Hajr (i.e. a town in Arabia) and its leaves were like the ears of elephants and four rivers originated at its root, two of them were apparent and two were hidden (Al-Bukhari 2001, hadith no 3207).

Sūrah Sabā' 34:16 expresses a specific antioxidant: jujube (*sidr*). This plant was grown in the Ma'rib area in Saba' Yaman after the tragedy of sail al-'arim; severe flooding destroyed the dam. Before the tragedy, the dam had caused beneficial plants to grow on its two sides, the left and right of the valley, demonstrating a sign of Allah's power. The people had been granted the best place to live with many blessings, such as their place did not have barren land, mosquitoes, flies, scorpions and snakes. They had the freshest and cleanest air (Jalal Al-Din, M & Jalal Al-Din 2000). Allah had punished them with the flood of the dam that swept away the delightful gardens filled with fruitful trees and replaced them with unbeneficial plants due to their ungratefulness to the blessings (Al-Sa'di 2000).

The term '*sidr*' in Sūrah al-Wāqī'ah 56:28 denotes a jujube tree (Al-Zamakhsyari 1987). It is Allah's gift to His servants in paradise; jujube trees without thorns which are a superior kind of jujube tree that can be only found in paradise and its fruit will be much superior to the jujube in worldly context (Maududi n.d.).

A specific antioxidant tree is presented in Sūrah al-Najm 53:14. The word '*sidrah al-muntaha*' indicates the jujube tree that is situated on the extreme edge which marks the last area between the sky and the seventh paradise (Al-Sa'di 2000) and also as a boundary that the angel and others cannot pass (Jalal Al-Din, M & Jalal Al-Din 2000).

This was where the Prophet was brought at the night of *al-isrā'* and *al-mi'rāj* occasion (Ibn Kathir 1998). The word '*al-sidrah*' in Sūrah al-Najm 53:16 refers to the same tree.

Banana is a unique fruit for the dwellers of paradise and it is portrayed as trees layered with fruit in Sūrah al-Wāqī'ah 56:29. Ali b. Abi Talib and Abu Saïd al-Khudri interpret the meaning of '*ṭalḥ*' as a banana. This opinion was agreed by some scholars such as Al-Tabari, Abd bin Humaid and Ibn Abi Hatim (Al-Suyuti n.d.).

Sūrah al-Ra'd 13:35 discusses an antioxidant in the hereafter context. The *āyah* describes the reward in paradise, promised for the God-fearing, the perpetual fruits that always fructify (Al-Baghawi 1999). Certain scholars interpreted the fruit by the word '*ukuluhā dāim*' as banana because it always fructifies regardless of the season.

Malik bin Anas interprets '*ukuluhā dāim*' as banana and no other fruit, which resembles the fruit of paradise other than a banana because it exists all the time, either in summer or winter (Al-Asbahani 1974). Certain scholars have a general view of the meaning of the word. Al-Tabari (2000) states that the word means any food to eat; it is perpetual for the people of paradise and does not disappear and get rotten.

The antioxidants are stated mostly in the *makkiyyah* context because they have fruits in abundance at Makkah. However, at certain times, the believers had to eat whatever they had. Narrated Sa'd: I was one of (the first) seven (who had embraced Islam) with Allah's Messenger (PBUH) and we had nothing to eat then, except the leaves of the *ḥabalah* or *ḥublah* tree so that our stool used to be similar to that of sheep (Al-Bukhari 2001, hadith no 5412).

Not only did Muslims face hunger at times, but the Quraish were stricken with a famine year in Makkah until they needed to eat bones and dead animals. This event was recorded in a *ḥadīth* narrated by Abdullah: When the Quraish troubled and stood against the Prophet (PBUH) he said, O Allah! Help me against them by afflicting them with seven years of famine like the seven years of Joseph. So they were stricken with a year of famine during which they ate bones and dead animals because of too much suffering and one of them would see something like smoke between him and the sky because of hunger (Al-Bukhari 2001, hadith no 4822).

Āyahs on the antioxidants were revealed mainly in the last stage of the Makkan period to portray that their sufferings would end shortly. The *āyahs* somehow depict that they will enjoy dates in Madinah because Madinah is the place for the cultivation of dates and they do not have to worry about the oppression and taunts anymore. For this, they need to prepare themselves for Hijrah.

VEGETABLES

Pumpkin is rich in carotenoids categorized as either carotenes or xanthophylls (oxocarotenoids) (Nahak et al. 2014). The pumpkin tree is stated in the story of Prophet Yunus in Sūrah al-Sāffāt 37:146. *Yaqṭīn* in the *āyah* means gourd or pumpkin, according to most scholars (Al-Baghawi 1999). When Prophet Yunus was thrown away on the shore by a big fish, Allah had grown a pumpkin tree to protect him from the sunlight by having him lie down under its shade and the tree protected him from flies (Al-Sa'di 2000). Pumpkin has numerous benefits, such as it is a fast-growing plant, it is shady because it has huge leaves, flies will not come near it and its fruit is nutritious (Ibn Kathir 1998).

Some scholars view that '*al-raihān*' in al-Raḥmān 55:12 represents any leaf with a pleasant smell; for instance, Tantawi (1997) denotes '*al-raihān*' as plants with an aromatic scent. Al-Sa'di (2000) believes that '*al-raihān*' refers to all leaves that can be eaten by human and basil leaf which is a fragrant leaf.

Al-Wāqī'ah 56:89 also denotes a reward for the dwellers of paradise. Some scholars interpret the term '*raihān*' as sustenance (Jalal Al-Din, M & Jalal Al-Din 2000) or good provision (Maududi n.d.) or any physical pleasure from any food and drink (Al-Sa'di 2000). Al-Baghawi (1999) understands the term as relaxation. Another meaning of '*raihān*' is a tree with a pleasant smell (Tantawi 1997). Ibn Ashur (1984) also has the opinion that '*raihān*' refers to a tree that has a leaf with a pleasant smell and people always use its leaf in drink gatherings.

CONCLUSION

The diet of Makkan society in 609-622 A.D. was based on a balanced amount of plant foods from fruits and vegetables and the use of olive oil as the source of vitamins and minerals. The beneficial antioxidant compounds in them contribute to health benefits and disease prevention. The fruits such as fig and olive in the Makkan are among the best types of fruits. The intake of fruits and vegetables in the Makkan diet in 609-622 A.D. more than meets the current food guide recommendation. Makkan dietary patterns in the use of olive oil is influenced by the Mediterranean diet. Tremendous efforts should be taken to preserve the healthful dietary traditions within the Saudi Arabia region, especially Makkah itself, and encourage a well-balanced antioxidant-rich diet in industrialized populations following the current dietary recommendations for health promotion and disease prevention.

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SOCIAL SUPPORT, COPING SKILLS AND METHADONE MAINTAINENCE AMONG CLIENTS AT KELANTAN REHABILITATION CENTERS

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Abstract

*Concurrent drug use among MMT clients has raised serious concerns and undermined the effectiveness of MMT program. Enhancing and maintaining the client's good social support and coping skill may have potential to counter this problem. To clarify this issue, we comprehensively explored the relation between social support, coping skills and concurrent drug use among MMT clients at Kelantan. **Method:** Face-to-face surveys were conducted with 312 clients randomly recruited from 28 MMT government facilities throughout each district at Kelantan. The Multidimensional Scale of Perceived Social Support (MSPSS) was used to assess client's perceived social support, the Brief COPE questionnaire was used to assess coping strategies and concurrent heroin use was measured based on self-report of concurrent drugs use during the past 7, 30 and 90 days. **Result:** Among the 312 participants, 48.4% self-reported to have continued illicit drug use within 30 days with used opiate 49.7% and followed by Amphetamines (Pil Kuda) with 39%. Among them, 42.9% reported still practiced injected opiate drugs and 10.2% reported injected amphetamine (Pil Kuda). Based on our analysis, it was found that having higher levels of perceived social support (OR=0.98, 95% CI .96,.990) and the implementation of adaptive coping strategies (OR=0.92, 95% CI .87-.97) was associated with lower likelihood of concurrent drug use. On the other hand, the use of maladaptive coping strategies (OR=1.19, 95% CI 1.12,1.26) such as self-blame, humour, substance use and behavioural disengagement and unsatisfied with dose (OR=2.19, 95% CI 1.07,4.48) was associated with increased likelihood of concurrent drug use. **Conclusion:** Adaptive coping strategies synergized with higher levels of perceived social support may serve a key psychosocial predictor in successful recovery process among MMT clients.*

Keywords: Social support, coping skills, clients, rehabilitation center

INTRODUCTION

Based on World Drug Report by United Nations Office on Drugs and Crime (UNODC, 2021), an estimated 275 million people worldwide aged 15 - 64 had used drugs at least

once in the previous year. Cannabis continues to be the most widely used drug worldwide with estimated 200 million past year users of cannabis in 2019 (UNODC, 2021). Meanwhile, opioids present the greatest harm to the health of drug users with severe health consequences associated with their use, including non-fatal and fatal overdose.

Over the last decade, there has been a diversification in the substances available on the drug markets. Compared to traditional plant-based substances (cannabis, cocaine and heroin), the expansion of a dynamic market for synthetic drugs and New Psychoactive Substances (NPS) is becoming more prevalent. According to UNODC (2021) the use of Amphetamine Type Stimulant (ATS) in particular crystalline methamphetamine, is considered to be increasing in East and South-East Asia with one third of the estimated global number of users.

Historically, drug abuse problem in Malaysia began in the late nineteenth century which since pre-independent era of Tanah Melayu. At that time, in order to increase the work productivity and combat fatigue among Chinese migrant workers in agricultural sector, opium was introduced by the British colonialist to workers (Rusdi et al., 2008). After independence era of Malaya, the widespread use of recreational drugs especially cannabis among young generation was influenced by “Hippy” subculture. Dramatically, the ethnic pattern of drug consumption changed where more young Malays involved in drug abuse problem in comparison of other ethnic groups (Mohamed & Nazar, 2011). In addition, detrimental effects from the Vietnam War in the late 1960s and early 1970s, the drug use problem in Malaysia became more deteriorated (Kamarudin, 2007). Consequently, the habit of drug taking for rest and recreation among American soldiers who stay at Malaysia influenced young people of Malaysians. Not only cannabis, all races in Malaysia began to abuse heroin, morphine, methaqualone, amphetamine, barbiturate and others (Kamarudin, 2007).

In early 1980s, the total amount of drug addicts almost reached the epidemic proportion with 65% of the drug addicts were adult men between the ages of 20 to 29 years old. On 19th February 1983, Malaysia declared the drug menace to be threat to national security. Until now, drug abuse problem continues to be a huge problem in Malaysia that give impact on social, health and security (Chie et al., 2015). Although Malaysia consists of strict drug laws, the number of drug addicts increasing year by year with the estimated number of 300,000 of adults in Malaysia used drugs at least once in their lifetime in 2019 (National Health Morbidity Survey (NHMS, 2019).

According to NHMS (2019), the majority of drug addicts that use both lifetime and current were highest in the groups of rural dwellers, low income and male. Recent data from National Anti-drug Agency (NADA) reported ATS use especially

methamphetamine is becoming most prominent in the country with 65.2% (83,698 people) and followed by Opiate with 30.8% (39,547 people) and Cannabis with 2.7% (3,396 people) (Annual Drug Report, 2020).

In 2020, the main trend of drug use in Malaysia has changed from opiate-based (heroin and morphine) to the Amphetamine-Type Stimulant (ATS) category. The use of ATS especially Crystalline Methamphetamine has substantially increased in recent years. In 2020, a total of 83,698 drug dependants were detected using methamphetamine (in crystalline and tablet forms), indicating an increase of 10.8% compared to 31,224 in 2019. In the same period, 39,547 drug dependants were detected using heroin and morphine compared to 10,154 drug dependants in year 2017, indicating a decrease of 23.7%.

In the era of millennium, HIV epidemic has been affected injecting venous drug users (IVDU) in Malaysia for many years with estimated about 75% and 80% respectively of new HIV cases every year were from IVDUs (Devi et al., 2012). Due to the high prevalence of HIV/AIDS among drug addicts especially IVDUs in Malaysia, the government finally decided to begin on Drug Substitution Therapy in early 2005 as an effort to prevent the spread of HIV/AIDS in the country (Reid et al., 2007). Therefore, in order to fulfil the Millennium Development Goal (MDG) aspirations in halting HIV transmission in Malaysia, a Harm Reduction Working Group (HRWG) was established in January 2004. The purpose of HRWG is advocating the importance of implementing harm reduction programme such as Needle Syringe Exchange Program (NSEP), provision of condom and methadone maintenance treatment (MMT) for the target group of People Who Use Drugs (PWUDs) (Singh et al., 2019).

Therefore, Malaysia started the programme of Methadone Maintenance Treatment to IVDU especially opioid dependence patients in government facilities at 2005 with the implementation of this program was as part of the National Harm Reduction Program (Devi et al., 2012). NSEP initiative also started in 2005 while the third component of provision condom was incorporated into both programs (Devi et al., 2012). MMT was started in October 2005 with ten MMT centers consisting of eight government facilities and two in private clinics and three NSEP services (Norsiah et al., 2016). Furthermore, NSEP was conducted by several Non-Government Organizations (NGOs) that received funds from Ministry of Health Malaysia (MOH) (Norsiah et al., 2016). In order to maximize the effectiveness of National Harm Reduction Programme, the MMT program has scaled up and included the other governmental agencies such as prisons and the National Anti-Drug Agency (NADA) facilities in 2008 (Norsiah et al., 2016). In 2019, total MMT centres is 811 that comprise of 496 government facilities and 315 private clinics in the country that provides treatment for total of 16 914 clients (Bahagian Perkhidmatan Farmasi, 2019).

For over 50 years, methadone has been prescribed to opioid-dependent client as a pharmacological intervention for alleviating the symptoms of opioid withdrawal (Jackson et al., 2014). In Malaysia, MMT program was found to be successful in reductions in opioid use, HIV risk-taking score, crime and improvement in social functioning, and quality of life in terms the physical, psychological, social, and environmental domains (Norsiah et al., 2016). In the last decade, Malaysia has progressively expanded MMT with around 496 facilities, 49,502 of total clients and 16,914 active clients throughout the programme (Pharmacy Programme Statistics Report, 2019). Nowadays, the growing availability of ATS in Malaysia during recent years has raised serious concerns about its abuse among successful methadone maintenance treatment clients (Singh et al., 2019). In addition, combined administration of opiates and stimulants is favoured among many MMT clients (Trujillo et al., 2011). Consequently, ATS abuse among clients has the potential to reduce the effectiveness of MMT programs (Wang et al., 2015; Vicknasingam et al., 2015; Singh et al., 2019). Moreover, the emergence of ATS dependence in a well-established MMT setting provides a unique situation, given the newness of the drug for successful MMT and clinicians inexperienced with ATS.

Illicit opiate use (Wang et al., 2015) and ATS abuse (Singh et al., 2019) among MMT clients reduce the effectiveness of MMT program. The prevalence of continuation of drug use among clients attending MMT clinics in Kelantan was high (Syazilawaty et al., 2021). Clients with poor coping skills were more likely to engage in concurrent drug use when they are feeling depressed, sad or anxious (Tran et al., 2018). Participants with engaging in concurrent drug use received poor social support in MMT treatment were significantly more likely to incompletely adhere to MMT (Le et al., 2020). The result found that 12.9% of MMT clients were positive for ATS and 9.2% clients were positive for both (opiate and ATS) compared with 10.4% were positive for morphine from the total of 2121 participants (Wang et al., 2015). Moreover, high prevalence of ATS among MMT clients at Kuantan Pahang with 27% self-reported to have injected methamphetamine, 35% reported injecting amphetamine and 21% administered opiates intravenously (Ruzmayuddin et al., 2019). Then, the prevalence of continuation of drug use among patients attending MMT in Kelantan was high as assessed by self-reported drug use within the last 30 days and positive urine test findings for drugs (Syazilawaty et al., 2021).

Enhancing and maintaining the client's good coping self-efficacy and social support are likely to improve opiate and other drug use outcomes with added benefits for treatment completion rates and the effectiveness of methadone programs (Senbarjo et al., 2009). Several literatures had demonstrated that social support is a significant predictor of success in methadone treatment and in the recovery process of drug users. Social support plays a crucial role in the treatment and recovery process of patients engaging in MMT (Khuong et al., 2018). Social support from spouses, family members,

peers, and neighbourhood have been proven to play significant roles in the recovery of drug-addicted individuals. The addiction literature suggests that social support can both discourage and promote substance abuse. In its positive role, social support is associated with commitment to and maintenance of behavioural change and successful alcohol and drug treatment outcomes. Social support is also associated with lower rates of drug initiation, use of illicit drugs, relapses, and high-risk drug use. Several studies suggested that in order to ensure the MMT clients break their drug addiction, they must be provided with social and behavioural modification support (Tran et al., 2018). Moreover, the involvement of families is critical to encourage as well as support patients to release the pressure from their lives and help them to quit drug use (Feng et al., 2018).

A recent study investigated relationship between perceived social support and depression among MMT clients at a hospital in Malaysia. A total of 196 subjects were recruited randomly selecting participants using a random number generator available online from the list of clients attending methadone clinic and MSPSS was used to measure the perceived social support of clients. Significantly, the results indicated that depressed methadone clients had significantly lower mean scores across all 3 subscales of family, friends, and significant others compared to methadone clients who were not depressed (Wahab et al., 2021). Furthermore, MMT clients may seek out illicit substance use when they are feeling depressed, sad or anxious (Tran et al., 2018). However, this study was only conducted in a centre where the findings might not be representative of the population. In addition, the dosage and compliance with the methadone treatment was not measured in this study. Then, concomitant illegal substances were not also taken into this study that may have potentials to affect the study outcomes.

Coping strategies are methods used by a person when dealing with stressful situations. A study by Tran et al., (2018) using The Kessler Psychological Distress Scale in order to measure MMT patients' mental health in mountainous areas in northern Vietnam. The higher Kessler scores indicated that higher levels of anxiety or depression and overall worse mental health. Hence, it displayed greater rates of concurrent drug use alongside MMT due to patients seek out illicit substance use when they are feeling depressed, sad or anxious. Indeed, Tran et al. (2018) concluded in their study that concurrent drug use among MMT patients found that patients with poor coping skills were more likely to engage in concurrent drug use. Furthermore, due to the chronic and recurrent nature of addiction, many MMT clients who are leaving drugs may slip back into the old pattern shortly after the maintenance period (Hoseiny et al., 2015).

Thus, coping and emotion-regulation strategies in order to increase resilience level play an important role in preventing the recurrences of substance abuse.

Emotion-regulation strategies and coping skills play an important role in preventing the recurrences of substance abuse (Hoseiny et al., 2015). In addition, the positive correlation between good social support and good quality of life also reflects good recovery capital for patients with MMT during long-term rehabilitation (Zhou et al., 2017). Thus, having members who can be relied on to provide emotional support, and having close members, were protective factors for concurrent heroin use in MMT clients (Shen et al., 2018). Hence, it is important for us to study the psychosocial factors such as social support and coping strategies associated with concurrent drug use among MMT patients. By determining the psychosocial factors, appropriate psychosocial interventions can be implemented in the MMT program in the future.

Although a lot of research has been done on patients on MMT, studies on their coping strategies have been scarce. The type of coping strategies employed by methadone-maintained patients are of the utmost importance due to the higher prevalence of psychiatric illness as well as the higher levels of stress experienced by them. Utilizing a repertoire of adaptive coping strategies might help buffer against depression and substance relapses in MMT patients. Similarly, MMT patients who adopt maladaptive coping strategies might turn back to abusing substances as a means of dealing with stress. These patients would then be at risk of dropping out or being terminated from the MMT program. Therefore, it is important for us to study the psychosocial factors such as social support and coping strategies associated with depression among MMT patients. By determining the psychosocial factors of depression in this group of individuals, appropriate psychosocial interventions could then be implemented in the MMT program in the future.

Research Question

1. What are the socio demographics of concurrent drug use of MMT clients?
2. What is the level of social support of MMT clients?
3. What is the level of coping skills of MMT clients?

LITERATURE REVIEW

Social Support among Methadone Maintenance Treatment Clients

Methadone treatment has been considered as a priority in Malaysia due to its high degree of effectiveness not only in reducing the frequency of opiate drug abuse, HIV-related risk behaviours and illegal activities, but also in improving the general health and quality of life among drug users (Norsiah, 2016). Since its first introduction in 2005, there are 491 methadone facilities to date, treating for 52,281 clients in the country (Pharmacy Annual Report, 2020). However, since MMT involves long-term medication, clients are likely to have the risk of suffering withdrawal symptoms, drug

relapse and drop out from MMT (Zhan et al., 2013 & Ren et al., 2013). Several literatures has demonstrated that social support is a significant predictor of success in methadone treatment and in the recovery process of drug users (Yang et al., 2013; Zhang et al., 2013 &). Data on social support is necessary to optimize the effectiveness of MMT.

Social support plays a crucial role in the treatment and recovery process of patients engaging in methadone maintenance treatment (MMT) (Khuong et al., 2018). Social support from spouses, family members, peers, and neighbourhood have been proven to play significant roles in the recovery of drug-addicted individuals (Kelly et al., 2010). In spite of with temporary drug treatment interventions, traditional approaches have been debated for concerning on the individual without taking into account regarding to the individual's environmental situation and external factors that may support or permit continued drug use (Brown et al., 2004). Thus, a key component of substance abuse treatment should involve strengthening the individual's social support among spouses, parents, family member, and community members (Yang et al., 2013; Zhou et al., 2017 & Rahimi et al., 2018).

Previous research has established that effective drug treatment may depend on the quality of an individual's interpersonal relationships (Lin et al., 2011;). Individuals who report supportive and cohesive family relationships at treatment entry have reported fewer drug, family, and psychological problems three months after beginning treatment (8,2). Social support is associated with commitment to and maintenance of behavioral change and successful alcohol and drug treatment outcomes.2 Social support is also associated with lower rates of drug initiation, use of illicit drugs, relapses, and high-risk drug use.3. Social support not only helps in maintaining good physical and mental health but also plays an important role in the recovery of methadone patients (Wahab et al., 2021). Low social support is associated with depression, anxiety as well as concurrent substance use, whereas higher levels of social support is associated with better retention in the MMT program (Lin et al., 2011 & Zhou et al., 2017)

Coping Skills among Methadone Maintenance Treatment Clients

Coping skill plays an important role in the recovery of substance users. Indeed, Tran et al. (2018) concluded in their study that concurrent drug use among MMT patients had poor coping skills were more likely to engage in concurrent drug use. Otherwise, most MMT clients who are leaving drugs may slip back into the old pattern shortly after the maintenance period due to the chronic and recurrent nature of addiction (Hoseiny et al., 2015). Thus, coping and emotion-regulation strategies in order to increase resilience level play an important role in preventing the recurrences of substance abuse. Furthermore, Wills et al., (2001) concluded in the study that

behavioural coping exerted a protective effect on drug use whereas avoidant or anger coping was significantly associated with initiation and escalation of substance use in adolescents. Moreover, substance users who have better coping skills are more likely to avoid a relapse. In addition, Avants et al. (2000) reported that a strong association among depression, illicit substance use, and avoidant coping in MMT clients and any clients who achieved abstinence following coping skills training intervention decreased the use of avoidant coping strategy. Besides that, the study found that enhancing coping skills during treatment leads to reduced substance use and improved psychological functioning among dual diagnosis clients (Wahab et al., 2021). A local study revealed that using certain coping strategies such as religion, planning, support seeking, positive reframing were associated with better health related quality of life among MMT patients (Lua & Samira, 2013).

Previous studies have investigated the relation between coping strategies and a range of substance abuse-related problems. There were several findings summarized that emotion-focused and avoidance coping strategies was associated with increased use of alcohol and illicit drugs use (Sánchez et al., 2009 & Robertson et al., 2010 &). Similarly, McConnell et al (2014) indicated that adaptive coping strategies were associated with lower tobacco and marijuana use, otherwise maladaptive coping strategies predicted tobacco and marijuana use among youth. Another finding by Van Gundy et al. (2015) concluded that problem-focused coping strategies were associated with lower risk of drugs-use; however, avoidance coping strategy was associated with increased risk of alcohol and illegal substances use. Similarly, the study outcomes of Feil and Hasking (2008) suggested that avoidant coping strategy was associated with increased alcohol use.

Although a lot of research has been done on patients on MMT, studies on their coping strategies have been scarce. The type of coping strategies employed by methadone-maintained patients are of the utmost importance due to the higher prevalence of concurrent drug use. Utilizing a repertoire of adaptive coping strategies might help buffer against substance relapses in MMT patients. Similarly, MMT patients who adopt maladaptive coping strategies might turn back to abusing substances as a means of dealing with stress. These patients would then be at risk of dropping out or being terminated from the MMT program. Therefore, it is important for us to study the psychosocial factors such as social support and coping strategies associated with depression among MMT patients. By determining the psychosocial factors of depression in this group of individuals, appropriate psychosocial interventions could then be implemented in the MMT program in the future.

Concurrent Drug Use among Methadone Maintenance Treatment Clients

Concurrent drug use refers to any clients never fully abstain from using opiates or other illegal drugs while in the treatment of MMT in the past 30 days. Concurrent drug use was a common phenomenon among MMT clients (Wang et al., 2015; Vicknasingam et al., 2015; Singh et al., 2019) and it subsequently exposed them to a greater risk. Yet, the MMT program providers often preferred to ignore this because ceasing treatment for continued drug use is associated with poorer client outcomes (Syazilawaty et al., 2021). Studies have shown that longer length of treatment is associated with the increased concurrent heroin use and that concurrent heroin use would directly increase the drop-out rates from the MMT program (Luo et al., 2016).

Despite the availability of methadone treatment in private and primary settings, it is reported that clients in private MMT setting are more likely to have poor treatment compliance and predisposed to abuse illicit substances than clients in primary MMT setting (Vicknasingam et al., 2015). Methamphetamine was the most commonly abused new-type drug and growing availability of Methamphetamine raised serious concerns about its abuse among MMT patients which has the potential to reduce the effectiveness of MMT program (Wang et al., 2015). Similarly, the study conducted in Kuantan Malaysia that enrolled MMT clients found that the high prevalence of ATS use among MMT clients (Singh et al., 2019). The use of amphetamine-type stimulants (ATS) is becoming prevalent among clients in Methadone Maintenance Treatment (MMT) program in Malaysia. Then, the prevalence of continuation of drug use among patients attending MMT in Kelantan was high as assessed by self-reported drug use within the last 30 days and positive urine test findings for drugs (Syazilawaty et al., 2021). However, this study did not mention specifically the types of drugs and other related drug substances abuse profile. Thus, in order to fill this gap, our study will investigate the prevalence of drug abuse among MMT comprehensively with examining the types of drug use concomitantly, route of drug administration, injecting drug behavior and reasons to use the drug use.

METHODOLOGY

This study use quantitative research designs by applying data to make statistical inferences about the population of interest. The scope and objectives in this study is appropriate with cross sectional study design. In this study, data collection survey of a population will be implemented at one point in time or cross-sectional design. The study will be conducted in government MMT facilities in Kelantan state. Kelantan is located in the northeast of Peninsular Malaysia and bounded with Thailand in the north. Majority of its residents are involved in the agricultural and business sectors. The total of MMT facilities in Kelantan that provide medical assisted therapy to drug

opiate users is 53 MMT facilities at primary care setting and 8 MMT facilities at hospitals. All MMT facilities scattered throughout 10 districts in Kelantan. Each MMT facility conducted by dedicated healthcare team among medical practitioners, pharmacists and medical assistants.

Study Population

All the respondents in this study were former opiate users who are currently active involve in Methadone Maintenance Treatment (MMT) program. According to Ministry of Health Malaysia (MOH), about 49,502 people have registered for MMT program until 2019 (Pharmacy Programme Statistics Report, 2019). Out of this number, only 16,914 people were actively involved in MMT program throughout Malaysia. Meanwhile, Unit Kawalan Penyakit AIDS/STD Jabatan Kesihatan Negeri Kelantan (JKNK) reported that about 3,145 people have registered for MMT program in Kelantan until October 2021. Out of this figure, only 718 clients were actively received methadone treatment in Kelantan.

The sample size for the actual study is calculated based on the table for determining sample size from a given population (Krejcie & Morgan, 1970). Unit Kawalan Penyakit AIDS/STD Jabatan Kesihatan Negeri Kelantan (JKNK) reported that about 3,145 people have registered for MMT program in Kelantan until October 2021. Out of this figure, only 718 clients were actively received methadone treatment in Kelantan. The sample size determination table is derivative from the sample size calculation which expressed as below equation (Krejcie and Morgan, 1970). The Krejcie and Morgan's sample size calculation was based on $p = 0.05$ where the probability of committing type error is less than 5 % or $p < 0.05$. Since the sampling frame for methadone users at Kelantan were known. According to Krejcie and Morgan's sample size determination table, the sample size representative for this study is 275 samples. Allowing for 10% dropout, a final sample size is $n=300$.

A stratified random sampling design will be adopted in this study. Currently, there are only 60 MMT clinics in 10 districts of Kelantan. Majority clients register MMT programme at local facilities and nearby with their home. The population mobility of MMT clients is low and the population is concentrated, so the cumulative number of clients in MMT clinic can reflect the prevalence of ATS misuse in the clinic. Therefore, first of all, we divided 300 samples according to geographical location of districts. All districts should obtain 20-30 samples and then randomly selected 2-5 MMT clinics as our research sites for each district. Finally, in each selected MMT clinics, we invited patients who met the inclusion criteria to join the study.

RESULT

Profile	n (%)	%	Concurrent Drug Use n (%)	
			Yes	No
Districts				
Kota Bharu	48	15.4	21 (13.9)	27 (16.8)
Tumpat	41	13.1	13 (8.6)	28 (17.4)
Pasir Mas	36	11.5	16 (10.6)	20 (12.4)
Tanah Merah	17	5.4	10 (6.6)	7 (4.3)
Bachok	20	6.4	10 (6.6)	10 (6.2)
Pasir Puteh	37	11.9	18 (11.9)	19 (11.8)
Machang	35	11.2	24 (15.9)	11 (6.8)
Kuala Krai	48	15.4	31 (20.5)	17 (10.6)
Jeli	19	6.1	7 (4.6)	12 (7.5)
Gua Musang	11	3.5	1 (0.7)	10 (6.2)
Age (years old)				
18-40	86	27.6	50 (33.1)	36 (22.4)
41-60	219	70.2	100 (66.2)	119 (73.9)
>60	7	2.2	1 (0.7)	6 (3.7)
Mean age	44.6			
	(SD=6.88)			
Mean age of first of illicit drug use	20.1			
	(SD=4.99)			
Gender				
Male	312	100	151 (48.4)	161 (51.6)
Ethnicity				
Malay	311	99.7	150 (99.3)	161 (100)
Chinese	1	0.3	1 (0.7)	
Religion				
Islam	311	9.7	150 (99.3)	161 (100)
Buddha	1	0.3	1 (0.7)	
Education Level				
No formal education	8	2.6	3 (2.0)	5 (3.1)
Primary	28	9.0	11 (7.3)	17 (10.6)
Secondary	249	79.8	124 (82.1)	125 (77.5)
Vocational Training/Diploma	23	7.4	10 (6.6)	13 (8.1)
University (Degree)	4	1.3	3 (2.0)	1 (0.6)
Employment				
Employed	249	79.8	115 (76.2)	134 (83.2)
Unemployed	63	20.2	36 (23.8)	27 (16.8)
Sectors of Employment				
Business	39	12.5	11 (7.3)	28 (71.8)
Labor	121	38.8	61 (40.4)	60 (37.3)
Factory	18	5.8	12 (7.9)	6 (3.7)
Agriculture	35	11.2	19 (12.6)	16 (9.9)
Others	38	12.2	14 (9.3)	24 (14.9)
Monthly Income (RM)				
<500	72	23.1	36 (23.8)	36 (33.4)
500-1500	152	48.7	70 (46.4)	82 (50.9)
1501-3000	21	6.7	7 (4.6)	14 (8.7)
>3000	7	2.2	4 (2.6)	3 (1.9)
No income	60	19.2	34 (22.5)	26 (16.1)
Marital Status				
Unmarried	124	39.7	66 (43.7)	58 (36.0)
Married	98	31.4	46 (30.5)	52 (32.3)

Divorced	90	28.8	39 (25.8)	51 (31.7)
Accommodation Status				
Family/Parents	263	84.3	128 (84.8)	135 (83.9)
Friends	4	1.3	1 (0.7)	3 (1.9)
Alone	36	11.5	15 (9.9)	21 (13.0)
Homeless	9	2.9	7 (4.6)	2 (1.2)
Previous incarceration history				
Yes	214	68.6	102 (67.50)	112 (69.6)
No	98	31.4	49 (32.5)	49 (30.4)
Times of incarceration				
1	63	20.2		
2	63	20.3		
≥3	89	28.5		
Previous drug rehabilitation history				
Yes				
No	131	42.0	55 (36.4)	76 (47.2)
Times of drug rehabilitation center	181	58.0	96 (63.6)	85 (52.8)
1				
2				
≥3	64	20.5		
	42	13.5		
	24	7.7		
HIV Status				
Yes	99	31.7	42 (27.8)	57 (35.4)
No	213	69.3	109 (72.7)	104 (64.6)
Duration of methadone treatment (years)				
1-5				
6-10	89	28.5	46 (30.5)	43 (26.7)
11-15	127	40.7	64 (42.4)	63 (39.1)
≥16	80	25.6	36 (23.8)	44 (27.3)
Mean of duration methadone treatment	16	5.1	5 (3.3)	11 (6.8)
	8.19			
	(SD=4.09)			
Methadone Daily Dose (mg)				
≤ 50	90	28.8	50 (33.1)	40 (24.8)
>50	222	71.2	100 (66.2)	121 (75.2)
Methadone Dose Satisfaction				
Yes	266	85.3	121 (80.1)	144 (89.4)
No	47	14.7	30 (19.9)	17 (10.2)

Table 1: Socio-demographic Characteristics of Respondents

All respondents were recruited from all districts at Kelantan state. The highest respondents were from Kota Bharu and Kuala Krai with both comprising of n=48 (15.4%). Subsequently, Tumpat 13.1% (n=41), Pasir Puteh 11.9% (n=37), Pasir Mas 11.5% (n=36), Machang 11.2% (n=32), Bachok 6.4% (n=20), Jeli 6.1% (n=19), Tanah Merah 5.4% (n=17) and Gua Musang 3.5% (n=11). The samples mean age in this study was 44.6 years (SD=6.88). While, the samples mean age of first illicit drug use was 20.05 years (SD=4.99). More than half (70.2%, n=219/312) were between 41 to 60 years-old. Then, followed by the group age in between 18 to 40 years old with 27.6%, n=86). The rest were above 61 years-old (2.2%, n=7). Based on the age profile, it can be deduced that MMT attendees in this study comprised of milder age adult respondents.

i. To Identify the Level of Social Support of Methadone Maintenance Treatment (MMT) Clients at Kelantan

Multidimensional Scale of Perceived Social Support (MSPSS) was used to examine the level of social support among Methadone Maintenance Treatment (MMT) clients. Reliability test of MSPSS revealed good internal consistency with Cronbach’s alpha value of .83. The mean and total scores for each subscale and overall Multidimensional Scale of Perceived Social Support (MSPSS) are summarized in Table 2.

Descriptive Items	Mean (SD)	Concurrent Drug Use	
		Yes N=151 Mean (SD)	No N=161 Mean (SD)
Subscales			
Significant Others	17.15 (6.32)	15.81 (5.91)	18.40 (6.44)
Family	18.49 (6.32)	16.80 (6.22)	20.07 (6.02)
Friends	15.76 (5.31)	14.77 (4.65)	16.70 (5.72)
Total Score Mean of MSPSS	51.41 (15.56)		

(Level: Low = 12 – 35, Moderate = 36 – 60, High = 61 – 84)

Table 2: Level of Social Support

Table 2 showed the mean and total scores for each subscale and overall MSPSS among MMT clients at Kelantan. The overall findings show that the level of social support is moderate perceived social support (M=51.41, SD=15.56). Family perceived social support subscales reported the highest level with M=18.49 (SD=6.32) followed by significant others subscale (M=17.15, SD=6.32) and friend subscale (M=15.76, SD=5.31).

According to Zimet et al (1988) any mean scale score ranging from 1 to 2.9 could be considered low support; a score of 3 to 5 could be considered moderate support; a score from 5.1 to 7 could be considered high support. All the items in MSPSS were within in the range of moderate perceived social support. In overall, this finding showed the level of social support among MMT clients at Kelantan with medium perceived social support for each subscale, significant others, family and friends.

ii. To Identify the Level of Coping Skills of Methadone Maintenance Treatment (MMT) Clients

The level of coping skills of Methadone Maintenance Treatment (MMT) Clients at Kelantan was assessed by applying the Brief COPE-M questionnaire. Due to Brief COPE does not yield an overall score, most researchers use EFA with principles component to create higher order factors based on their own data as suggested by Carver (1988). There is a variation in latent factor structures among published literature using the Brief COPE.

The EFA revealed that denial construct in BRIEF-COPE crossed loaded on different factors (<0.4) and was therefore removed from the subsequent analysis. From the remaining subscales, the EFA identified a 4-factor solution for the brief COPE (eigenvalue greater than 1.0). The brief COPE presented with a good internal consistency with Cronbach's α within 0.61 - 0.81 for each coping strategy. The rotated factor pattern and final communality estimates for each subscale is presented in the Table 3.

Factor	Subscale	Factor Loading	Communality	Cronbach's Alpha
Adaptive	Positive Reinterpretation	.61	.56	0.81
	Planning	.57	.57	
	Acceptance	.57	.44	
	Religion	.90	.64	
Active and Self-distraction	Self-distraction	.77	.58	0.73
	Active Coping	.73	.58	
Support Seeking	Emotional Support	.71	.45	0.71
	Instrumental Support	.84	.65	
Maladaptive	Substance Use	.62	.31	0.61
	Behavioral Disengagement	.54	.28	
	Venting	.43	.41	
	Humor	.44	.36	
	Self-blame	.49	.38	

Kaiser-Meyer-Olkin was 0.84, Barlett's test of sphericity was significant (p -value <0.001), Principal axis factoring was applied

Table 3: Exploratory Factor Analysis of BRIEF COPE-M

Based on the analysis, the extracted factors were named firstly as “adaptive coping strategies” which consisted of positive reinterpretation, planning, acceptance and religion. Second factor consisted of active coping and self-distraction subscales was named as “active and self-distraction” coping strategies. The third factor consisted of two items which use of instrumental support and use of emotional support subscales and was named “Support seeking.” Last factor was named maladaptive coping strategies which consisted of substance use, venting, behavioral disengagement, and self-blame. Factor scores of each coping strategy for each participant were computed and used in the subsequent analysis. The mean scores for each subscale are summarized in Table 3.

Categories	Subscale	Mean (SD)
Adaptive	Positive Reinterpretation	5.21 (1.62)
	Planning	5.19 (1.57)
	Acceptance	5.07 (1.64)
	Religion	5.81 (1.67)
Active and Self-distraction	Self-distraction	4.88 (1.61)
	Active Coping	5.25 (1.55)
Seeking Support	Emotional Support	4.58 (1.59)
	Instrumental Support	4.79 (1.56)
Maladaptive	Substance Use	3.76 (1.83)
	Behavioral Disengagement	3.67 (1.53)
	Venting	4.29 (1.48)
	Humor	3.98 (1.58)
	Self-blame	4.59 (1.73)

Table 4: Level of Coping Skills

This finding revealed that the five most common coping sub scales used by the respondents in this study are religion subscale ($M=5.81$, $SD=1.67$), active coping ($M=5.25$, $SD=1.55$), positive interpretation ($M=$, $SD=$), planning ($M=$, $SD=$ and

acceptance (M=, SD=). Meanwhile, the five least commonly used by the respondents in this study are behavioral disengagement (M=3.67, SD=1.53), substance abuse (M=3.76, SD=1.83), humour (M=3.98, SD=1.58) and venting (M=4.29, SD=1.48).

DISCUSSION

i. What is the Level of Social Support of MMT Clients

The Multidimensional Scale of Perceived Social Support (MSPSS) has been used in this study to examine an individual's perceived level of social support with family, friends, and significant others. The total score for each MSPSS subscales in our study is low outcome. This study outcome was consistent with another local recent study with their results indicated that MMT clients had statistically significant lower perceived social support from family, friends, and significant others (Suzaily et al., 2021). In contrary with our finding, a study at China demonstrated that 66.7% of MMT respondents exhibited good perceived social support total score that reflected to physical and psychological health (Zhou et al., 2017).

Correspondingly, several studies demonstrated that social support was a significant predictor of success in methadone treatment and in the recovery process of drug users (Yang et al., 2013; Zhang et al., 2013 & Zhou et al., 2017). Social support from spouses, family members, peers, and neighbourhood have been proven to play significant roles in the recovery of drug-addicted individuals (Kelly et al., 2010). Social support is also associated with lower rates of drug initiation, use of illicit drugs, relapses, and high-risk drug use.³ Social support not only helps in maintaining good physical and mental health but also plays an important role in the recovery of methadone patients (Wahab et al., 2021).

Social support should be incorporated in the treatment plan and recovery process of MMT clients. Furthermore, the findings suggest that, aside from routine treatments, MMT clinical staff might offer more comprehensive interventions for patients and their family members, friends, and/or significant others, such as health education or counselling, family support training, and MMT knowledge lectures, all of which can be useful for establishing an accurate understanding of MMT among patients and reducing negative attitudes toward MMT patients among family members, and perhaps, society at large (Yang et al., 2018).

ii. What is the Level of Coping Skills of MMT Clients

Brief COPE-M has been used to identify the level of coping skills of MMT clients. Our finding revealed that the five most common coping sub scales used by the respondents in this study are religion subscale, active coping, positive interpretation, planning and acceptance. In addition, none of the of the five most popular coping strategy among

MMT clients at Kelantan categorized under maladaptive coping strategy. Meanwhile, the five least commonly used by the respondents in this study are behavioral disengagement, substance abuse, humour, venting and denial. Supposedly, substance users who have better coping skills are more likely to avoid a relapse. Meanwhile, another local study revealed that MMT clients applied certain coping strategies such as religion, planning, support seeking, positive reframing was associated with better health related quality of life among MMT patients (Lua & Samira, 2013).

Coping skills training intervention should be incorporated in the module of MMT in ensuring reduced illicit drug use while in the MMT treatment. Several studies supported coping skill plays an important role in the recovery of substance users who if any clients had poor coping skills were more likely to engage in concurrent drug use (Tran et al., 2018). Thus, coping strategies in order to increase resilience to cope with stressors is very pivotal preventing the recurrences of substance abuse among clients. Furthermore, Wills et al., (2001) concluded in the study that behavioral coping exerted a protective effect on drug use whereas avoidant or anger coping was significantly associated with initiation and escalation of substance use in adolescents.

CONCLUSION

In conclusion, adaptive coping strategies and social support serve as a key predictor in order to achieve success in MMT treatment. Thus, specific interventional programs targeted at scope of social support and coping should be provided to the methadone clients. Such as, implementation of psychosocial intervention in MMT by introducing the module of social support and coping skills in CBT approach. This intervention may can provide some important insight on how to eradicate the concurrent drug use issue among MMT clients. Besides that, we suggest all client under MMT program should be educated regarding related coping strategies and ways to deal with dysfunctional coping strategies. MMT staff particularly counsellor should emphasize the issue of social support and coping skills in their session. Moreover, MSPSS and Brief-Cope questionnaire should be used by MMT staff to recognize their MMT clients who perceive social support and identify the pattern of coping strategies in order to address their concerns accordingly. These proactive interventions may be able to assist in reducing the concurrent drug issue among MMT clients.

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MILLENNIALS INVESTORS AND INVESTMENT INTENTION IN DIGITAL RETAIL SUKUK

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Abstract

Millennial investors have an important role in developing sukuk investment products and services, specifically at the retail level. Sukuk issuances play a critical role in promoting economic growth as a source of domestic funding. At present, there are moves towards introducing digital sukuk at the retail level to make it accessible to general public. The present study investigates the knowledge and preferences of millennials towards digital retail sukuk offered in Malaysia and Indonesia. For that purpose, survey questionnaires are distributed in early 2022 to 135 respondents in both countries to examine their perceptions and awareness of retail digital sukuk investment based on purposive samplings. Identifying factors influencing millennials investment decision in retail digital sukuk will contribute to the development of Islamic financial products and services in both countries. The findings suggest that values and technology-fit tasks are important variables in sukuk investment among the respondents. To the policymakers, the findings will provide an early profile of millennials investors who are more inclined to use technological advances in investing. It is important to understand millennials' preferences to appropriately assess both opportunities and risks in investing.

Keywords: Retail sukuk, digital sukuk, millennials investors, Covid-19, Islamic economics

INTRODUCTION

The sukuk market is seen as a vehicle for channelling the world's increasing pool of Shariah-compliant investment toward economic growth that is both sustainable and equitable. The worldwide sukuk issuances are mostly dominated by the sovereign, quasi-sovereign, corporate, and financial institutions. Sovereign issuances continue to lead the pack, followed by the quasi-sovereign, which explains why government support is necessary, particularly in the growth of the sukuk market. The sovereign sukuk formed 73 percent of the total global Sukuk (IIFM Sukuk Report, 2019) as shown in Figure 1 for the period 2001 to 2019. Sovereign sukuk issuances have two benefits. First, providing funding for the government borrowing requirement. Second, giving ready access to liquidity for the growing number of Islamic banks that operate in sukuk issuing countries.

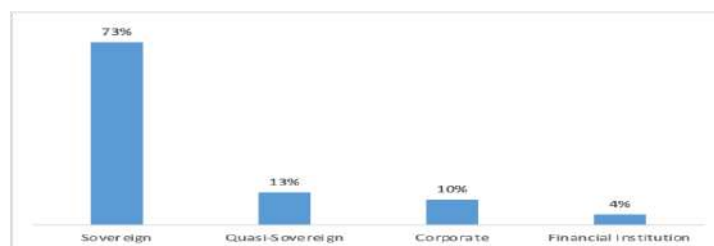


Figure 1: Global Sukuk Issuances by Issuers Status, 2001-2019
Source: IIFM Sukuk database.

Sovereign sukuk issues are the significant contributors to global sukuk market growth. In 2019, Saudi Arabia, Indonesia, Malaysia, United Arab Emirates (UAE) and Turkey continue to provide a solid base for sovereign sukuk market (IIFM, 2019). After its establishment, gross sovereign issuance from sukuk was USD 680.7 billion by the end of 2019, representing about 54.58 percent of all global sukuk issuances. Global sovereigns have continued to increase within the first two months of 2020. Nevertheless, the Covid-19 pandemic may disrupt economic growth. Since economic recovery process will not bounce back quickly, there is a growing possibility that most sovereigns will issue sukuk to fulfil their fiscal budget.

On September 22, 2020, the government of Malaysia launched its first digital retail sukuk, called Sukuk Prihatin. The issuance received overwhelming responses from both individual and corporations and was oversubscribed. Proceeds from the issuance were channelled to the Covid-19 Fund to finance expenses related to the pandemic. The subscription of the retail sukuk was made accessible on digital banking platform for a minimum of RM500 Malaysian ringgit to support the nation's recovery effort. The investors may opt to redeem or donated the principal amount on maturity date. The two-year maturity sukuk Prihatin was redeemed on September 22, 2022. Against this background, the present study seeks to identify factors influencing millennials' investment decisions in digital retail sukuk. It contributes to the literature by examining the investment behavior of millennials on digital platform focusing on sukuk retail.

The paper is organized into five sections. After the Introduction, Section 2 covers literature review. Section 3 explains research method and Section 4 continues with the discussion on results and analysis. Section 5 concludes the paper.

LITERATURE REVIEW

Background

Indonesia and Malaysia dominate the issuance of sovereign sukuk. Malaysia and Indonesia are the key sources of sukuk supply in 2019, constituting 45.12% and 10.46%

of the global sovereign sukuk, respectively (IIFM Sukuk Report, 2020). One form of the sovereign sukuk is retail sukuk. Retail sukuk is intended to facilitate greater retail participation in the Islamic capital markets and economic development as well as to meet the demand for retail investors to access more Islamic investment products. The Indonesia Government introduced *Sukuk Ritel* (Retail Sukuk) in 2009 and *Sukuk Tabungan* (Savings Sukuk) in 2016, which have been issued in 13 series and seven series, respectively. As for Malaysia, sukuk retail is relatively new, it was first introduced in 2015 and then liberalized regulatory framework in 2018 (sc.com.my). In terms of innovation, Indonesia was awarded The Best Islamic Capital Market at the 2020 Global Islamic Finance Awards (GIFA), one of which was due to innovations in the sukuk issuance (kemenkeu.go.id).

Several studies discovered that economic growth has a strong effect on the development of the sukuk market (Ahmad et. al, 2012, Istiqomah, 2012, Said and Grassa, 2013, Smaoui and Nechi, 2017). On the other hand, the development of the sukuk market also has a significant impact on economic growth. In a different context, Goaid and Sassi (2010) examine the connection between Islamic finance and economic development in a sample of the Middle East and North Africa (MENA) countries. The authors utilize an imbalanced panel data set and estimated a dynamic panel model using a generalized method of moments (GMM) estimation. Their results show no statistically significant correlation between Islamic finance and economic development in the economies they studied. However, the primary study's shortcoming is that the nations studied have various economic and financial development levels. The dispersion between these two indicators may not be constant among MENA countries. As a result, the study findings may be skewed. Researchers indicate that macroeconomic factors influence the development of the sukuk market (Said & Grassa, 2013; Istiqomah, 2012; Smaoui and Nechi, 2017). However, some macroeconomic indicators such as inflation are not significantly influenced by this type of Islamic instrument.

Behavior of Retail Investors

Researchers suggest that retail investors are irrational due to their risk-profiles behavior. However, their irrationality might not be uniform. According to literature, the irrationality of the retail investors is evident in the form of over confidence, herd behavior, price anchoring, short-termism, control, risk propensity, and callousness to advice. Watching the behavior of the market, planning at personal level and ability to book loss are the major guiding principles to get return from the market (Mishra, Mohnaty & Krishnankutty, 2016). Wood and Judith (2004) study categorize retail investors as either risk intolerant, confident, loss averse young traders, or conservative long-term investors. This classification was based on the respondents investment horizon, risk attitude, personalization of loss, confidence, and control.

METHODOLOGY

Data collection for this study are based on survey questionnaires. The data used in this study are collected based on purposive sampling and were collected from late 2021 until early 2022. The survey instrument was developed based on past literature as shown in Table 1. There are 11 themes covered to explore the purchasing behavior of millennials on sukuk subscription online. The variables are adapted to be in line with the research objectives. Some of the questions are based on a 5-point Likert scale, in which 1 denotes Strongly Disagree and 5 denotes Strongly Agree.

The total number of data collected is 135 respondents where 77 are from Indonesia and 56 are from Malaysia. Table 1 shows the profile of the respondents. Demographic data from the respondent are collected that included gender, education and employment status. Table 1 provides descriptive statistics for the respondents' characteristics.

Characteristics	No.		Percent (%)	
	Malaysia	Indonesia	Malaysia	Indonesia
<i>Gender</i>				
Male	20	41	34.5	53.2
Female	38	36	65.5	46.8
<i>Sukuk Subscription</i>				
Yes	7	29	12.1	37.7
No	51	48	87.9	62.3
<i>Education</i>				
Senior High School	1	11	1.7	15.6
Undergraduate	5	61	8.6	79.2
Postgraduate	52	4	89.7	5.2
<i>Employment Status</i>				
Student/College	55	94.8	30	39
Housewife/Unemployed	0	0	4	5.2
Government sector	1	1.7	2	2.6
Private Sector	0	0	26	33.8
Self-Employed	1	1.7	6	7.8
Others	1	1.7	9	11.7

Source: Survey.

Table 1: Profile of Respondents

In Malaysia, respondents are mostly female, in their early 20s, pursuing undergraduate studies. Approximately 12 percent of them have subscribed to sukuk digital. For Indonesia, the 77 respondents are approximately equally represented by

male and female; around 48 percent have transacted in sukuk digital, are in their mid-20s, pursuing their first degree, and some are working in the private sector.

Table 2 lists the descriptive statistics for the survey based on the 11 variables. For Malaysia, the highest mean value is for the variable Technology-fit task while the lowest one is Positive Word-of-Mouth. In the case of Indonesia, the highest variable is Values while the lowest average mean value is Accessibility, Religiosity, Positive Word-of-Mouth, and Recommended.

No.	Variables	Theme	Malaysia Mean (std. dev.)	Indonesia Mean (std dev.)
1.	Ease of Access	Easy access to invest in sukuk	3.06 (0.65)	3.21 (0.57)
2.	Values	Sustainable-oriented economy/community	3.54 (0.59)	3.49 (0.58)
3.	Technology/Digital Transaction	Electronic transaction/online sales/digital transactions	3.54 (0.57)	3.48 (0.59)
4.	Perceived usefulness	Useful for community and social impact	3.42 (0.59)	3.36 (0.55)
5.	Self-Enhancement	Important for self-actualization	3.45 (0.52)	2.97 (0.52)
6.	Attitude	Sukuk vs. conventional products	3.49 (0.55)	3.32 (0.65)
7.	Religiosity	Shariah-compliant attributes	3.05 (0.56)	3.08 (0.56)
8.	Intention to Invest/Donate	Donation of investment returns	3.21 (0.57)	3.01 (0.66)
9.	Intention to Invest/Re-Donate in a higher amount	Will donate in higher amount in future	3.53 (0.56)	3.01 (0.59)
10.	Positive Word of Mouth	Will promote sukuk to others	2.89 (0.78)	2.69 (0.88)
11.	Recommendation	Will recommend sukuk to others	3.29 (0.66)	2.92 (0.87)

Source: Survey.

Table 2: Findings of the Survey

RESULTS AND DISCUSSION

We run the descriptive analysis for the data separately for Indonesia and Malaysia. Table 2 shows the results of the findings. Based on the average values of the nine variables measured (based on Likert-scale 1-5), the responses that are highest for Malaysia are for the variables 'Values' and 'Intention to donate a bigger amount in the future.' Meanwhile, Indonesian respondents rated 'Values' and 'Technology' as the highest. For variables that show approximately similar responses in both countries, Values, Technology, and Religiosity. The lowest response for respondents from Malaysia is in the category of 'Accessibility and 'Positive-Word-of-Mouth.' For Indonesia, the 'Accessibility' and 'Positive Word-of-Mouth' variables recorded lowest average mean values.

Based on the findings, millennials are a large potential market segment in the issuance of retail sukuk. Therefore, studying their behavioural pattern is important to increase their participation in economic development, particularly for post-pandemic economic recovery period, through the issuance of digital sukuk. It is also important to investigate the perceptions of millennials that can form attitudes and intention to participate in the digital sukuk issuance whether to invest for profit-oriented or to donate (social/non-profit oriented). Values attached to Shariah-compliant products and technology-fit tasks are the important factors in sukuk investment, while market awareness and easy access to investment opportunities are factors that should be improved in the future.

CONCLUSION

The present study explores the behavioral intention of the Millennials on sukuk investment. Based on the findings, the Millennials are willing to invest more in the sukuk instrument in the future because they consider shariah-compliant products and technology-fit tasks as important determinants. Millennials are aware of financial literacy and are willing to invest and help the economy recover from the recent coronavirus pandemic. There are shaping the economy and could be the game-changer for markets and the Islamic capital market. Of late, there is a shift in their financial goals where the Millennials are saving more from their salaries as compared to prior generations. Most Millennials consider ESG (Environmental, Social, and Governance) as important goals in investing. Earnings, in the long run, are driven by technology.

Therefore, for policy implementation, raising awareness and educating millennials on easy access via digital platform for retail sukuk. Given the recent global recession due to Russia-Ukraine war, studies show that sukuk market fared better than its conventional counterpart because of limited exposure to the conflict. In addition, stronger dollar makes borrowing in domestic market more attractive. Future work in

retail sukuk should take into account new global risks that might reduce government borrowing needs in major sukuk markets.

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EVOLUTION OF ENTREPRENEURIAL MINDSET: FROM CRADLE TO GRAVE

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Abstract

Entrepreneurship is a field of study that aims to help students, individuals, and organizations to overcome their entrepreneurial problems and increase entrepreneurial outcomes and activities. It is critical to the country's and society's economic progress. Individuals, communities, and nations gain from a wide range of social and economic advantages provided by the area of entrepreneurship. Through the invention and inventiveness of entrepreneurs, the area of entrepreneurship has contributed to develop job possibilities and the manufacture of a variety of products. The aim of the article is to bring together the findings from preliminary studies on the content and process of developing an entrepreneurial mindset. As a result, the current state of the literature on the notion of entrepreneurship has been consolidated to better understand its origins, roots, and development. The author hopes to encourage entrepreneurship in children as early as primary school. In doing so, they acquire entrepreneurial experience, skills, and talents as well as the ability to solve entrepreneurial problems. This article provides a comprehensive understanding of the idea of an entrepreneurial mindset to make it more comfortable for individuals and organizations to engage in interactive entrepreneurial activities in their daily lives. This study is an analysis of the literature with the goal of better understanding the idea of the entrepreneurial mindset. An in-depth explanation of various major subtopics explored by the author will provide a thorough understanding of an entrepreneurial mindset.

Keywords: *Entrepreneurial Mindset, Skills, Thinking Patterns*

INTRODUCTION

Entrepreneurship is a field of study that aims to help students, individuals, and organizations to overcome their entrepreneurial problems and increase entrepreneurial outcomes and activities. It is critical to the country's and society's economic progress. Individuals, communities, and nations gain from a wide range of social and economic advantages provided by the area of entrepreneurship. Through the invention and inventiveness of entrepreneurs, the area of entrepreneurship has contributed to develop job possibilities and the manufacture of a variety of products. Scholars have conducted extensive studies on how best to foster an entrepreneurial mindset in schools and colleges around the world (Kouakou, Li, Akolgo, & Tchamekwen, 2019). The cognitive ability to think, reason, make judgments, and reason can be characterized as the mind. The entrepreneurial mindset refers to socio-emotional skills and entrepreneurial awareness overall related to entrepreneurial

motivation and future success as an entrepreneur. The literature broadly documenting a wide range of socio-emotional skills related to entrepreneurship, which includes confidence, self, leadership, creativity, risk appetite, motivation, resilience, and self-efficacy (Boyd & Vozikis, 1994; Cassar & Friedman., 2009; Cloete & Ballard., 2011).

The aim of the article is to bring together the findings from preliminary studies on the content and process of developing an entrepreneurial mindset. As a result, the current state of the literature on the notion of entrepreneurship has been consolidated to better understand its origins, roots, and development. The author hope to encourage entrepreneurship in children as early as primary school. In doing so, they acquire entrepreneurial experience, skills, and talents as well as the ability to solve entrepreneurial problems. This article provides a comprehensive understanding of the idea of an entrepreneurial mindset to make it more comfortable for individuals and organizations to engage in interactive entrepreneurial activities in their daily lives. This study is an analysis of the literature with the goal of better understanding the idea of the entrepreneurial mindset. An in-depth explanation of various major subtopics explored by the author will provide a thorough understanding of an entrepreneurial mindset.

This article hopes to achieve these objectives:

1. To identify the approaches used to inculcate entrepreneurial mindset in children, youth, matured/retirees, and persons with disabilities.
2. To critically examine the role of entrepreneurial education in instilling entrepreneurial mindset

Entrepreneurship

Entrepreneurship can be defined as the process by which individuals pursue opportunities regardless of the resources, they control (Barringer & Ireland, 2010). It explains that entrepreneurship can also be defined as the ability and motivation to take opportunities to achieve success in the economy, create new value in the market, or determine opportunities by a person to work independently or in an organization. Ahmad (2013) defines entrepreneurship as a process in which opportunities to create new future goods and services are discovered, evaluated, and explored. Thus, from innovative or innovation, entrepreneurs will benefit from entering current markets, competing, changing markets, or creating new markets. For success in the business world, new ideas must be formed. However, it requires the ability to integrate creativity or innovation with a reliable management system and tailor the development of an organization by optimizing it at every stage of the life cycle. Goals and strategies should be determined for the organization for day-to-day management activities.

Whereas entrepreneurs are people who create and create products to market. Entrepreneurship comes from the French word “entreprendre.” Entrepreneurs are also known as self-employed people, which means they work for themselves, making their own decisions, including strategy, finance, and management. For example, Kreiser et al. (2013) state that entrepreneurs are facilitators and creators of entrepreneurship where someone who creates wealth and takes economic risks, time, and ingenuity, and then, makes an energetic commitment to building value from existing or new products and services. Some people believe entrepreneurs are born, not created. However, many studies that have been done in the past have agreed where entrepreneurs are not genetically inherited, and entrepreneurs can be created (Barringer & Ireland, 2010). Everyone has the potential to be an entrepreneur, especially for those who have undergone the educational process at the university (Gelard & Saleh, 2011). For entrepreneurs who are just starting their business, it requires creativity and innovative efforts to improve and promote the business, therefore they can enter a market that can compete with other competitors (Kadir, Salim, & Kamarudin, 2012). Entrepreneurs form the most effective and powerful army in the global world. They change society not through their shields, but by their products and services.

Entrepreneurial Mindset

The entrepreneurial mind is a way of thinking and making decisions that may be applied in complicated, unpredictable, and dynamic settings (Naumann, 2017). The entrepreneurial mind may also be characterized as a person's conduct that is predisposed to the discovery, appraisal, and use of chances for entrepreneurial actions and outcomes. (Bosman & Fernhaber, 2018). The entrepreneurial mindset is also characterized as opportunity identification, proclivity for risk-taking, uncertainty tolerance, and self-assurance. According to reports, this set has a direct relationship with entrepreneurial education (Anuar & Sahid, 2020). They discovered that entrepreneurship education can enhance the development of students' behavior and entrepreneurial attitude in the government's attempts to generate more entrepreneurs among graduates, reduce unemployment, and expand business prospects (Anuar & Sahid, 2020). For that, Vasanthadevi and Norasmah (2016) mentioned that instructors must be proactive in the classroom to guarantee that pupils have the traits and entrepreneurial mentality. This is consistent with the purpose of education, which is to instill in pupils an entrepreneurial attitude. The topic of the entrepreneurial mind is a scholarly study of interest to several researchers in the field of entrepreneurship (Ireland, Hitt, & Sirmon, 2003; Ananda & Mukhadis, 2016; Halim & Sahid, 2020; Subramaniam & Shankar, 2020). The entrepreneurial mind is a human behavior that has a thought tendency to explore, evaluate, and capitalize on opportunities for desired entrepreneurial activities and outcomes (Bosman & Fernhaber, 2018). McGrath and MacMillan (2000) argue that a person would have had an entrepreneurial mindset

if they had acted and thinking as another entrepreneur. Thus, entrepreneurial leaders need to have an entrepreneurial mindset that can be used to encourage entrepreneurial behavior (Renko, El Tarabishy, Carsrud, & Brännback, 2015). The mindset is a comprised cognitive belief system from mutual beliefs, assumptions and knowledge related used to process information, inform decisions and control behavior (Rettig, 2017). A set of beliefs, knowledge, and mental processes that drive entrepreneurial conduct is known as the entrepreneurial mindset. Entrepreneurial attitude can be cultivated and honed via hands-on experience. (Solesvik, Westhead, Matlay, & Parsyak, 2013). In addition, to cultivate a set of minds, entrepreneurship is about creating experiences of entrepreneurship learning in the classroom, organization, and community.

Skills

The first element in the mind of an entrepreneur is decision -making skills. Zakri and Saemah (2015) consider decision making to be a cognitive talent that causes critical thought in each scenario in daily life. Decision-making abilities are also vital in generating future generations capable of making sound judgments that will propel the country forward. (Abdullah M. S., 2017). For Safiah et al. (2016) meanwhile, decision making refers to the process of choosing over available alternative options. The study of Nor Hamizah et al. (2020) also shows that decision-making abilities have a link with resilience, which can help pupils cope with social and emotional challenges. Students are stated to make decisions frequently since it is a necessary aspect of their existence. In the study of Safiah et al. (2016) youths who take part in the decision-making process can develop leadership abilities. Characteristics such as friendliness, confidence, maturity, and risk-taking attitudes may all have an impact on how a person makes judgments. (Greenbank, 2010).

The ability to solve problems is the next component of the entrepreneurial mentality. Problem-solving abilities are cognitive processes that identify circumstances to improve and acquire acceptable answers using a variety of ways (Hassan & Buang, 2019). Azizi (2010) defines problem -solving skills as cognitive processes that use information to find appropriate methods to achieve goals. According to Ayu and Ariyadi (2018), students' problem-solving abilities can be utilized to measure their learning. However, issue-solving experiences in everyday life are typically unstructured, complicated, and diverse, leaving pupils unable to handle problems outside of the classroom owing to a lack of adequate problem solving and possibilities for knowledge application in real-world scenarios. (Kuang, Szu, & Kuen, 2104).

Opportunity tracking skills are the third element in the minds of entrepreneurs. According to Nor Liza et al. (2019) tracking opportunities is identifying a product or service that has value and can be converted into profit. Opportunity tracking skills not

only identify ideas from opportunities that have potential but can also direct a person to convert opportunities into successful endeavors (Wasdani & Manimala, 2015). Cristian et al. (2011) claimed that by looking at and acting on reality when finding opportunities, entrepreneurship education will have a significant impact on pupils. Process models, cognition, and tactics for improving creativity, as well as ways to develop skills for tracking opportunities, all have parallels.

Dare to take chances is described as a person's attitude toward accepting and avoiding risks in circumstances with the possibility for equal profits and losses (Farida, 2019). Abdul Aziz et al. (2011) said that although entrepreneurs have the nature to dare to take risks but need to make careful judgments first to face the risk. Mohamad Ayub and Radin Siti (2019)) also agree with the statement that daring to take risks is a characteristic of entrepreneurship that an entrepreneur must have but not blindly daring. For Nahid et al. (2019) meanwhile, individuals who are less willing to take risks are often described as risk avoidance and individuals who are more willing to take risks are often characterized as risk seekers.

The ability to work in a group is the final aspect on entrepreneurs' thoughts. A group of people with teamwork abilities work together and independently to achieve goals, have the power to manage at least part of operations, and communicate freely and effectively. (Sulaiman, et al., 2017). A person's capacity to collaborate with individuals from diverse sociocultural backgrounds to attain the same goals is often referred to as teamwork abilities. (Ngadiman & Jamaludin, 2018) . Each team member needs to contribute ideas so that the decisions made are effective. The findings of the study of Norazila et al. (2017) showed that student involvement in co-curricular units is related to the formation of students 'teamwork skills. Akindele (2012) says that teamwork activities that are often held in the classroom help students to prepare themselves to interact with others in the workplace later.

Thinking Pattern

When faced with uncertain conditions, there are three mental patterns that help leaders to engage their organizations. People-oriented thinking, goal-oriented thinking, and learning-oriented thinking are the three entrepreneurial brains. According to Obschonka and Stuetzer (2017) , leaders who stay inclusive and open are classed as people-oriented thinkers, as are leaders who are upbeat and appreciate their subordinates. This element can help leaders win the respect and trust of their employees and team members. This is critical to foster an entrepreneurial culture within the company and encourage people to think and behave entrepreneurially. Leaders who can stay open and inclusive can acquire the support of subordinates and even external stakeholders. As a result, a people-oriented entrepreneurial perspective might have an impact on the type of entrepreneurial action taken.

Next, people-oriented thinking is related to goal-oriented thinking (Duening & Metzger, 2017). The balance between human orientation and goal orientation becomes a catalyst for action to entrepreneurial leaders (Kirkley, 2016). Because of a strong emphasis on the goal to be attained, entrepreneurs with a goal-oriented entrepreneurial mindset persevere in the long run. Entrepreneurial leaders must recognize that being an entrepreneur is not an easy or quick path, and they must believe in reasons to keep going. The firm's vision and mission may be attainable because of a goal-oriented entrepreneurial mindset.

Meanwhile, entrepreneurs who listen to and choose signals from all parties are classified into two categories: learning-oriented thinking and entrepreneurial thinking, or entrepreneurs that are trying something new (Subramaniam & Shankar, 2020). The two components, on the other hand, have something in common: they can motivate subordinates since they are participating in entrepreneurial activities. These entrepreneurs' entrepreneurial minds are linked to people-centered ways of thinking, purpose, or learning. Subordinates' participation in entrepreneurial activities is also critical to the firm's existence.

RESEARCH METHODOLOGY

In exploring the theme of Entrepreneurial Mindset, the author began by performing a narrative literature review approach. This strategy is used since mindset exploration is part of psychology's body of knowledge. This approach is recommended by Baumeister (1997) and Snyder (2019) in conducting research on psychology. A narrative literature review is an examination of the present state of knowledge on a particular subject. They are important because they build a theoretical structure and a research focus or perspective (Baker, 2016). The aim, underlying hypothesis or problem, or the reviewer's argumentative thesis must all be specified in this broad literature review, which serves as the start of a thesis or dissertation. A survey of the most significant and critical components of current knowledge on the issue is provided in this general literature review (Onwuegbuzie AJ, 2016). Narrative overviews are valuable instructional materials since they condense a lot of information into one understandable package. They are useful for giving a general overview of a subject and frequently discuss the history or evolution of an issue or its management (Green, Johnson, & Adams, 2006).

Because the breadth and character of the literature search are determined by the search terms (keywords), they should be defined thoroughly to allow for the selection of all relevant articles while eliminating those that aren't. (Ferrari, 2015). For this study, the author used the term "entrepreneurial mindset", "measuring entrepreneurial mindset", "entrepreneurial mindset and primary school", "entrepreneurial mindset

and children”, “entrepreneurial mindset and youth”, “entrepreneurial mindset and university”, “entrepreneurial mindset and retiree”, and “entrepreneurial mindset and mature entrepreneur” to find publications on the issues being studied. The publications were downloaded from SCOPUS database and Google Scholar database.

To critically assess the articles, the author has come up with a review matrix using Microsoft Excel. The matrix includes items such as research objectives, methods, samples, sample size, location, variables, results, and future research. This strategy is known as the preview, question, read, summarize (PQRS) system and it makes it easier to identify and retrieve content, especially in reviewing a big number of publications (Cronin, Ryan, & Coughlan, 2008).

Children

Children must thrive not just academically but also in terms of soft skills in order to generate learners who are competitive and successful in the future. This aligns with Ab. Wahid's (2019) perspective, which is that to generate human capital for the country's requirements, the attributes that present in social entrepreneurs must be nurtured in students. Entrepreneurial theory, or the creation theory to entrepreneurial value, explains the entire entrepreneurial process, from entrepreneurial purpose and opportunity discovery through the growth of entrepreneurial skill and distribution of entrepreneurial rewards (Mishra & Zachary, 2015). Parents are the most accessible and easiest individuals to persuade their children to start their own business. According to Othman & Mismar (2010), most families assist their children while they participate in economic activities. One of the variables that drives kids' interest in entrepreneurship is instructor motivation and the instructor can come from internal or external members of the family. Aigerim Mukhambetova et al. (2019) explore how to foster an entrepreneurial culture and a development mindset in children aged 9-11, and they advocate for the creation of an alternative learning experience that would not only challenge traditional academia's stranglehold on students' imaginations, but also acknowledge the impact of climate change, population growth, and high levels of automation, all of which, if left unaddressed, could jeopardise humanity if left unaddressed.

Knowledge disclosure is connected to managing business and commerce, and it has an impact on children's knowledge when it is implemented through the curriculum and co-curricular activities at the secondary school level. Learning at this young age might result in youngsters who are more self-assured and have a strong interest in the subject of business. In addition to fundamental information, a student's success as an entrepreneur is heavily influenced by their prior experience. The manual activities had an effective effect in developing children's skills for entrepreneurial thinking and its dimensions. The choice of proper teaching methods is critical since it

may aid in increasing students' grasp of a subject. Teaching entrepreneurial program in schools using student-centered teaching approaches is completely supported by related sources and literature. However, there is still a dearth of solid data to support or disprove this assertion. In research of the Kolb Model-based teaching approach used by speakers in the Youth Entrepreneurship Program, it is evident that there is a divide between the frequency with which speakers utilize teaching methods and the suitability of such approaches in the eyes of students (Othman, Pihie, Nazri, & Tarmizi, 2003). Even in a dangerous and unpredictable setting, students with an entrepreneurial mindset used reflective thinking and reasoned decision-making to solve difficulties utilizing their ingenuity and creativity (Hashim, Ali, & Shamsudin, 2018).

A study conducted by Sharpe (1994) aimed to emphasize the need for parents to instill an entrepreneurial mindset in their children. It suggested that successful adults identified these values, attitudes, and practices as children while internalizing their parents' demands for high levels of achievement. The importance of developing intrinsic motivation, where reward is based on success in performance was also emphasized. Typically, children are born to parents who value success and achievement while providing support, encouragement, and appropriate resources. This takes the form of a focus on high standards of performance, successful task completion, providing experiences and activities that require learning and practice, efficient time management with prioritized tasks, guidance to be self-sufficient within family-agreed boundaries, and setting short-time deadline goals. Also, the role of parents in this process shifts from being a guide, teacher, and initiator of stimulating activities, experiences, and engagements, to being a supporter of hard work and practice, replacing the parent teacher with a professional who understands the evolving competencies of the child and who can set appropriate tasks that challenge the child's curiosity and spur him into growing and sustainable businesses where new skills are learned, practiced, perfected, and honed.

Ngwoke, Aneke and Oraelosi (2020) proposals focused on the importance of increased government involvement in both the public and private sectors, which should be represented in the areas of funding, oversight, training of teachers, promotion of outside help and parent education to instill entrepreneurial mindset among children. As a result of these advancements, early childhood education practices are more closely aligned with the developmental characteristics and needs of preschool children, allowing them to develop an entrepreneurial mindset that will prepare them to acquire the entrepreneurial skills required to become successful entrepreneurs. Zupan, Cankar and Cankar (2018) discussed on the utilization of the design thinking technique, a teaching strategy for promoting creativity, inventive thinking, and an entrepreneurial attitude in young people as a universally applicable talent where teachers utilized the design thinking process to promote hands-on

student projects and assessed their success in instilling an entrepreneurial mindset among school children in Slovenia.

To summarise the literature, the most common method of developing entrepreneurial attitudes in this age group is through entrepreneurship curriculum and co-curricular activities, with the majority of these programmes taking place in a formal school context. In addition, the literature emphasises the relevance of parental involvement in the development of a child's entrepreneurial attitude.

University Students

Entrepreneurship is the basis and platform for establishing new job prospects for young people all around the world (United Nations, 2014). The area of entrepreneurship is also defined as an activity aiming at enhancing national wealth through greater economic activity, public job creation, and self-income production (Bakar, et al., 2015; William & A.J., 2013). Unemployment is a global problem that has long occupied the attention of governments, companies, job seekers, and educators (Eze, Ezenwafor, & Igberaharha, 2016). This becomes even more critical when the number of job vacancies is insufficient to meet the job demand. At the individual level, there are also students who do not achieve a certain level of mastery of skills or have high but low skills in soft skills, leadership skills as well as weak English making them difficult to penetrate the job market (Chiu, Mahat, Rashid, Razak, & Omar, 2016). One of the main mediums to solve the problem of unemployment nowadays is, by making entrepreneurship as a major career choice. This can be achieved through the process of cultivating entrepreneurship through strengthening the entrepreneurial mindset in the society either formally or informally.

Entrepreneurial education is getting a lot of tractions in higher learning institutions all over the world. The European Commission is promoting increased entrepreneurship education at all levels of education through the ENTRECOMP framework, to equip the public with the ability to translate concepts into actions, ideas that generate value for someone other than oneself (Colombelli, Loccisano, Panelli, & Pennisi, 2022). Since 2007, entrepreneurship has been taught as a required topic in all Malaysian higher education institutions (Jabatan Pendidikan Tinggi, 2022). Students in entrepreneurship courses are more likely to agree that they are taught entrepreneurial abilities and encouraged to acquire entrepreneurial skills. Entrepreneurship is offered as a career choice, but they also feel they need to learn more about entrepreneurship, according to research carried out by the University of Bristol (João & Silva, 2018). The introduction of entrepreneurship education as a commencement prerequisite job assignment workshop has been advocated as a method to improve entrepreneurship education for engineering students, with results indicating that the proposed solution had a positive impact on students'

entrepreneurial attitudes, mindsets, and intents (Sababha, Abualbasal, & Al-Qaralleh, 2020).

In a study conducted among 1000 students at the Malaysia Technical and Vocational Education and Training (TVET) institutes, the results showed a significant difference in entrepreneurial mindset between level of certification received and their level of exposure to the business (Dahalan, D'Silva, Ismail, & Mohamed, 2018). Having an entrepreneurial attitude has successfully expedited university students' entrepreneurial intentions and it has an influence on entrepreneurship education and aim in part thus suggesting that the university has established itself as a major intervention in boosting students' entrepreneurial intentions (Mukhtar, Wardana, Wibowo, & Narmaditya, 2021). Entrepreneurship education has a positive influence on students' entrepreneurial desires and mentality, according to a study of TVET students in Indonesia which suggests that the entrepreneurship mindset has successfully mediated the association between learning and entrepreneurial objective among learners (Handayati, Wulandari, Soetjipto, Wibowo, & Narmaditya, 2020). Another pedagogical method that has been implemented in higher education institutions in Sweden and Russia is intervention by creating a learning environment in which undergraduates become engaged, forward-thinking students (Tosey, Dhaliwal, & Hassinen, 2015; Hulténa & Tumunbayarova, 2020). The use of problem-based and project-based instructional methods to instil entrepreneurial attitude in undergraduate students was shown to be engaging and successful in two studies conducted in South Africa (Swart, 2014; Botha, 2010). By collaborating across programmes and learning goals, Schakett et al. (2014) proposed a multichannel strategy to acculturating an entrepreneurial mindset. Kuznetsova-Bogdanovits et.al. (2018) believe that it is necessary to build an educational concept that helps students to broaden their understanding and critically examine their own entrepreneurial mindset as well as what is going on in the market and in the wider public. The use of ICT, particularly eLearning, in delivering entrepreneurship education might be another way to broaden the course's reach and the introduction of entrepreneurial thinking and acting as alternatives to standard teaching methodologies is an important part of a university's aim to attract and retain students (Loboda, Ostrovskiy, & Katernyak, 2018). Despite the importance of pedagogical enrichment in instilling an entrepreneurial mindset in students, Nadelson et al. (2018) believe that professional development to improve faculty members' awareness of entrepreneurial thinking, as well as support for instructional and material choices that might help students acquire an entrepreneurial mindset, are also necessary. Incorporating environmental and sustainability problems into entrepreneurship education programmes in order to foster a green entrepreneurial mentality among students and gain green business operations is another fascinating addition to existing research on entrepreneurial mindset (Uvarova, Mavlutova, & Atstaja, 2021).

In the university, there are a lot of approaches to teaching and learning. Bosman et. al. (2019) discovered that blended learning, notably entrepreneurially inclined online dialogues, is an excellent way to bring the entrepreneurial attitude into the teaching space. Challenge-Based Learning is another teaching and learning strategy that has been used to help students develop an entrepreneurial mindset. It is a teaching style in which learners learn in a real-world setting while dealing with questions and real-world problems that they or current businesses have offered (Chanin, et al., 2018).

A study by Colombelli et. al. (2022) suggest that Challenge-Based Learning programmes have a good and significant impact on students' entrepreneurial mindsets and skills, such as financial literacy, creativity, and planning.

To conclude based on the literature, the most prevalent technique of instilling entrepreneurial attitude in this particular age group is through entrepreneurship education, with the majority of these programmes taking place in a formal educational setting.

Matured Entrepreneurs And Retirees

The issue for the government, businesses, institutions, and civil society is to encourage adult individuals to work in a healthy and economically active way. A large number of these professionals work and strive to reinvent themselves professionally, looking for personal significance in their job. Mature and professional above the age of 50 entrepreneurs are also in charge of their own development and must seek out avenues for progress, such as those outlined earlier in these concluding considerations (Sousa, 2020). To serve the adult audience, the mechanisms must become more accessible and qualified. This incentive boosts the local economy while also serving as a model for the national economy, reducing the negative consequences of the social security issue. Singh and DeNoble (2003) examine early retirees' decision to become self-employed from a labour economics and entrepreneurial perspective and believe that early retirees must first decide whether to remain in permanent employment or work part-time.

Currently, little is known about the advantages of late entrance into entrepreneurship for individuals, although it is thought that tacit knowledge gathered from past jobs is critical to an individual's capacity to establish and build a small business (Stephens & Hegarty, 2021). Thus, developing and running a small enterprise has the potential to have a positive impact on members of the silver economy. The retirees offer significant advantages in terms of resources and knowledge, both of which are critical for entrepreneurship. Retirees who are involved in commercial business interests should be recognized as catalysts in the economic development process because it is assumed that they are knowledgeable enough to manage their entrepreneurial passions and thus energise the economy of the country in question.

Furthermore, encouraging elders to start businesses might be viewed as a way to extend the working lives of the ageing population. In the context of a dynamic society that often fails to solve fundamental social, environmental, and cultural problems, social entrepreneurship and social economy are complicated and evolving concepts and realities. Legal and institutional frameworks are being developed around the world to support social ventures that are proving to be inventive and long-lasting solutions to complicated problems. Vulnerable socio-economic groups such as retirees need innovative solutions to maximize their economic and social potential. Social entrepreneurship and social economics are complicated, developing concepts and realities. Retirees are at the centre of a social entrepreneurship movement aimed at making them more socially inclusive (Drăgușin, Welsh, Grosu, Iosif, & Zgură, 2015). In a study done by Napi (2012) on the retired armed forces personnel in Malaysia, he discovered that factors such as pension income, education level, family business history, and business experience prior to leaving the Malaysian Armed Forces are important in developing the retirees' entrepreneurial mindset.

To conclude based on the literature, the entrepreneurial mindset for this particular group was developed at the early stage of their lives. Pushing factors such as family factors, economic factors, and the entrepreneurial experience factors are the most prevalent factors that influence their entrepreneurial mindset.

People With Disabilities (Pwds)

People with Disability, according to Samuel et al. (2001), are those who require supports to live independently in the community owing to physical or mental disabilities. Those with Disabilities (PWDs) are defined by Sulaiman (2008) as people who have restricted mobility (movement), whether physical (limbs), eyesight, hearing, or mental (light, medium or heavy). PWDs have the same right to life as everyone else, and their needs and rights must be addressed for them to be treated equally. PWDs concerns must be prioritized, according to the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP, U. , 2012), to guarantee that PWDs enjoy their rights and benefits and are able to fully engage in society. Barriers to handicapped people's equal rights must be addressed in areas such as work, education, health, and transportation. Society should foster a compassionate attitude toward the unfortunate persons with disabilities, in addition to no longer rejecting their rights and needs.

Moore et al. (2019) looked at the link between ADHD and the entrepreneurial mentality and discovered that entrepreneurs with ADHD had a more intuitive cognitive style and higher degrees of entrepreneurial awareness. The potential impact of ADHD looms big, since a slew of recent research demonstrate a beneficial link between creativity, entrepreneurial orientation, and new venture start. Thus, accepting

that ADHD should not be stigmatized or sentimentalized in the context of entrepreneurship, scholars will offer a more comprehensive framework for ADHD (Lerner, Hunt, & Verheul, *Dueling Banjos: Harmony and Discord Between ADHD and Entrepreneurship*, 2018). Lerner, Verheul, & Thurik (2019) discovered that, despite ADHD's drawbacks and persons with enough condition to be professionally diagnosed, ADHD has a favourable rather than negative impact on the chance of exploring into the entrepreneurial field. Entrepreneurial adults with ADHD have indicated that having ADHD has aided them in their endeavors, and the contentions are more likely to be caused by hyperactive symptoms rather than inattentive symptoms in studies such as entrepreneurial adults with ADHD have indicated that having ADHD has aided them in their undertakings (Antshel, 2016). According to Dimic and Orlov (2015), ADHD patients have a much greater marginal chance of becoming entrepreneurs, although ADHD has no effect on the prospect of being employed or jobless. Furthermore, as compared to the general population, those with ADHD had much higher entrepreneurial propensity scores. A model by Wiklund, HolgerPatzelt, & Dimov (2016) highlights impulsivity as a primary motivator of entrepreneurial activity and hyperfocus as a major catalyst for its good and negative repercussions, based on a multiple case study of fourteen entrepreneurs previously diagnosed with ADHD.

To summarise, the most common method of establishing entrepreneurial attitudes in this group is through activities that promote creativity and invention, with the majority of these programmes taking place in a formal training context, according to the literature.

IMPLICATIONS AND RECOMMENDATIONS

With a migration to the digital age, parental influence on instilling entrepreneurial mindsets among children should be further analyzed. Given conditions, such as parental attitudes, support, control, and reinforcement, Sharpe (1994) argue that the relevance of parental and family effects on molding children's behavior and cognitive processes is critical. This is supported by Lindquist, Sol, & Praag (2015) research in which they found out that parental influence regardless of whether biological or adopted parents will significantly increase the likelihood of the children to enter entrepreneurial stage by 60%. The success of such impacts will be argued to be highly dependent on the kid as an individual, as well as the degree to which parenting techniques correspond to developmental stages. Future research should explore that effect of technology as a moderating factor between parental influence and instilling entrepreneurial mindset among children.

Aside from that, a pedagogical approach to entrepreneurial education encourages entrepreneurial learning via hands-on experiences that mimic the environment in which entrepreneurs operate. There are a lot of research done on pedagogical approaches towards instilling entrepreneurial mindset among children and youth (Arfiana & Wijaya, 2018; Bosman, Duval-Couetil, Mayer, & McNamara, 2019; Botha, 2010; Chanin, et al., 2018). The current pedagogical setup is a formal education setup ranging from primary education up until the university level. A close look up should focus on developing a suitable pedagogical approach for the mature/retirees' entrepreneurs due to the training is normally not in a formal educational setup. Thus, the author would like to suggest an exploration on pedagogical approach for the mature/retirees' entrepreneurs. This idea should be justified for two reasons: (1) to determine if the pedagogy utilized in the formal classroom is appropriate for mature/retiree entrepreneurs, and (2) to investigate novel pedagogical approaches for this specific target group. Furthermore, a customized pedagogical approach for persons with disabilities, whether physical or non-physical, should be designed based on the unique impairments.

In addition, the author would also like to suggest that empirical studies should be expanded to develop and strengthen the theory of entrepreneurship as a dominant set of entrepreneurial mindsets. This study should also be highlighted because the economy today requires the country to take seriously the importance of entrepreneurship in economic growth. Moreover, the measuring of entrepreneurial mindset for various age groups and forms of engagement, including full-time, part-time, and even serial entrepreneurs, is an issue worth studying in terms of future research.

CONCLUSIONS

To become competitive and successful students in the future, children must excel in both academics and soft skills. Early intervention can aid in the development of confidence and a strong interest in entrepreneurship among children. The children's entrepreneurial thinking abilities and dimensions improved because of the hands-on and experiential learning activities. However, there is still a scarcity of solid data to back up or reject this assertion. Furthermore, parents' responsibilities are critical in stimulating children's curiosity and inspiring the development of expanding and sustainable enterprises where new abilities are found, applied, and polished.

Entrepreneurship is the foundation and platform for young people all around the world to create new career opportunities. Unemployment is closely linked to a reduction in entrepreneurial activity, particularly among graduates. This can be accomplished through the institutional or informal cultivation of entrepreneurship in

society. Entrepreneurial education is becoming increasingly popular at universities across the world. Apart from that, to enhanced entrepreneurial education in a formal education setting, professional development to raise teacher knowledge of entrepreneurial thinking is also required, as is support for instructional and material choices that may assist students develop an entrepreneurial mindset. The instructor in an entrepreneurship education environment should have the upper hand in terms of having appropriate business acumen as well as the correct entrepreneurial mentality.

Entrepreneurial mentality is a way of thinking that drives students' behavior toward entrepreneurial results and activities. Entrepreneurial-minded students are more likely to seek out new possibilities and develop new things. Meanwhile, sub-attributes such as entrepreneurial experience, identifying entrepreneurial possibilities, risk tolerance, locus of internal control, achievement, and tenacity, as well as financial management, are all part of entrepreneurial talents. Every institution of higher learning should encourage students to participate in entrepreneurial programs to develop the area of entrepreneurship and reduce graduate unemployment. Students benefit greatly from university entrepreneurship programs so that they do not have to rely just on their main discipline to develop a profession. This is because most students who participate in these programs obtain a range of information and abilities, including soft skills and entrepreneurial skills, as well as increased self-confidence and formed a network of their peers. Entrepreneurial students can benefit from a network of entrepreneurs, including family, friends, suppliers, the government, and others, who can give resources, knowledge, support, and opportunities. This study has discussed the need to explore in more depth about the entrepreneurial mindset. Entrepreneurship education can help develop the attitude and mindset of students in the efforts to increase the number of entrepreneurs among graduates and can reduce unemployment and increase business opportunities that will have a direct impact on the achievement of developed country status. Effective education will have a positive impact on other fields such as entrepreneurship and others.

Adults must be encouraged to work in a healthy and productive manner by the government, companies, institutions, and civil society. To appeal to an adult audience, the processes must become more accessible and qualified. At this time, little is known regarding the advantages of late entrance into entrepreneurship for individuals, although it is considered that tacit knowledge gathered from past jobs is essential to an individual's capacity to establish and build a small business. In the context of a dynamic society that frequently fails to address basic social, environmental, and cultural concerns, social entrepreneurship and social economy are complex and evolving concepts and realities. Retirees, for example, are a vulnerable socioeconomic group in need of fresh solutions to help them achieve their economic and social goals.

Overall, a variety of ways are utilized to instill an entrepreneurial mentality in children, adolescents, adults, retirees, and people with disabilities. There are currently no one-size-fits-all techniques to dealing with these distinct populations. Furthermore, independent of pedagogical contexts, entrepreneurship education has a vital role in creating entrepreneurial attitude, as evidenced by this article.

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THE IMPACT OF CSR DISCLOSURE AND FIRM VALUE: A STUDY OF GCC ISLAMIC BANKS FROM 2018- 2019

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Abstract

The main aim of this research is to analyze the CSR disclosure and examine its consequences to firm value among Islamic banks in the GCC (Gulf Countries Council). In fulfilling the research aims, annual reports of GCC Islamic banks for the period 2018- 2019 are analyzed using manual content analysis, which involves 78 observations of 39 Islamic banks. The CSR disclosure index is constructed based on 11 dimensions using AAOIFI standard no 7, 2010 and prior research. An ordinary least square (OLS) regression is used to examine the determinants and consequences of CSR disclosure in the sample Islamic banks. To examine the economic consequences of CSR disclosure, the study uses three different proxies of firm value (MTBV, Market Capitalization and Tobin Q). Using market capitalization proxies, this current study finds that there is a significant relationship between CSR disclosure and firm value. The study did not find any significant relationship between other proxies. This current study suggests that there is a need to improve the current CSR disclosure practice in GCC Islamic banks by imposing additional constraints on the board of directors' characteristics. The results inform the global debate on the need for corporate governance reform in Islamic banks, by providing insights on the role played by corporate governance mechanisms in encouraging and enhancing CSR disclosure practice among Islamic banks.

Keywords: AAOIFI, Corporate Social Responsibility (CSR), Content Analysis, Disclosure Level, GCC, Islamic banks, Firm Value

INTRODUCTION

The recent development of corporate social responsibility has a significant impact on the role of business, and has resulted in the change of accounting practices (Aribi & Gao, 2010). Nowadays, banks are not only focused on generating profit for their shareholders, but they have to also be more accountable and concerned with CSR issues in their business activity (Zain, 1999a; Morsing & Perrini, 2009). There is a growing concern within the business community with the significance of the key stakeholders attached to socially, environmentally, and ethically responsible behavior by business enterprises (Zadek et al., 1997). The pressure on companies to be

accountable to a wider audience of stakeholders is coming from a number of resources, such as the ethical investors, a growing number of pressure groups, consumer associations, and the growing number of United Nations and European Community Directives (Gray et al., 1988). As a result, public expectations of CSR have increased, and have forced companies to become more concerned about their relationship with societal interest groups and their corporate social responsibility (Held, 1970).

The rising importance of CSR disclosure in practical applications is also reflected in academic research (e.g., O'Dwyer et al., 2005; Plumlee et al., 2008; Nichols and Wieland, 2009; Simnett et al., 2009; Johansen, 2010; Dhaliwal, Dhaliwal et al., 2012). Companies are no longer seen by society as institutions which give a mutual benefit to their shareholders only, but as organizations that operate within society which has a responsibility to ensure socio-economic justice and, at the same time give benefit to the stakeholders (McDonald & Puxty, 1979; Mohammed, 2007). As the banks realize the significance of stakeholders financial anticipation, the role of CSR disclosure has become more important as a means of discharging accountability (Gray et al., 1996; Park & Ghauri, 2014). In this sense, Haniffa (2002) argues that social responsibility reporting can be seen as a response by companies to the changing expectations of the society in which they operate. Nevertheless, it could be argued that social reporting is used as a tool to change perception without changing the fact.

The Need of CSR Disclosure

Based on the accountability principles, Islamic banks are required to disclose all information that reflect their identity (Bayoud et al., 2012). Accountability from an Islamic perspective is wider than in the Western context, as it involves accountability to the God (Allah) as a main priority, then accountability toward its stakeholders (El-Halaby & Hussainey, 2015a). Accountability can be measured for Islamic banks through reporting, which shows the extent to which the disclosure practices of these banks reflect their accountability towards Allah and their stakeholders. Maali et al. (2006), categorize three broad objectives that are used as the basis for accountability disclosures by Islamic banks: a) to show compliance with Shariah, b) to show how the operations of the business have affected the wellbeing of the Islamic community, and c) to help Muslims perform their religious duties. According to Belal et al. (2014), Islamic banks have a similar responsibility to other financial institutions; they are expected to provide the best quality services without neglecting the social needs of their stakeholders.

Islamic banks represent a part of Islamic society and may consider their accountability towards the society as such: to be involved in charity activities and provide a Waqf (endowment) fund for the benefit of the society. CSR reporting, based on Gray et al (1995, p. 35), in this sense "extends the accountability of organizations, beyond the traditional role of providing a financial account to owners of capital, in

particular shareholders". The objective of the establishment of Islamic banks is to promote a social and ethical justice towards society, and the promotion of social welfare and justice are significant to Islamic banks as part of their CSR (Haniffa and Hudaib, 2007). In the context of Islam, the key aim of Islamic banks' reporting is to disclose that all their activities follow Shariah principles (Baydoun and Willet, 2000). Hasan and Siti-Nabiha (2010) argue that issues regarding transparency and accountability in Islamic banks need further research. Therefore, the compliance of CSR disclosure can be considering as a way of Islamic banks to show their transparency and accountability towards society in conjunction with their compliance with the Shariah. The main aim of this research is to analytically explore the extent of CSR disclosure practices in GCC Islamic banks, then study will examine its consequences towards firm value.

METHODOLOGY - THEORETICAL DISCUSSION

Signaling Theory

Signaling theory is an extension of agency theory (e.g., Buskirk, 2012; Jensen and Meckling, 1976). Spence (1973) introduced signaling theory in 1973 through his research on the information gap between employee and employer. It was developed to explain the information asymmetry between managers and shareholders (e.g., Black et al., 2006a; Morris, 1987). Signaling theory can be applied in the event of information asymmetry and, hence, this problem may be reduced when the party who has more information signals it to other interested parties. Signaling is a common phenomenon, applicable in any market with information asymmetry (Morris, 1987). Therefore, this theory was used to explain managers' incentives to disclose more information in financial reports (e.g., Haniffa and Cooke, 2002). Managers must disclose adequate information in the financial statements to convey specific signals to potential users. Morris (1987, p. 51) claims that in order to ensure that information signaling from firms is effective in reducing the information asymmetry, the signaling costs must be borne by agent so that they have an incentive to signal truthfully.

According to signaling theory, a manager discloses information in order to reduce information asymmetry and to signal to outsiders that a firm is performing better than its peers (Álvarez et al., 2008). Signaling theory posits that investors rely on the information delivered by firms (Abhayawansa and Abeysekera, 2009), highlighting that the credibility of information is crucial in ensuring less information asymmetry (Hughes, 1986). In this regard, "A good firm can distinguish itself from a bad firm by sending a credible signal about its quality to capital markets". Bhattacharya and Dittmar (2004) argue that a signal will be credible only if the bad firm chooses not to mimic the good firm by sending the same signal.

The importance of corporate disclosure arises from being a means of communication between management, outside investors, and market participants. Enhanced corporate disclosure is believed to mitigate the asymmetry problem and agency conflicts (Lambert et al., 2007). The consequences of increasing disclosure levels are often discussed in terms of reduced mispricing, cumulative profitability and growing firm value (FV) (Botosan and Plumlee, 2002). Consequent empirical studies provide supporting evidence about the association between disclosure and firm value (FV). For instance, Healy et al. (1999) find that firms with expanded disclosure levels experience substantial corresponding increases in firm value (FV). The direct effects of the corporate disclosures can change the firm value (FV) by affecting managers' decisions and, hence, varying the distribution of future cash flows (Lambert et al., 2007). Thus, improved corporate disclosure may increase the market value for firms (Elzahar et al., 2015). This theory will be used to test the CSR disclosure consequences variables.

Economic Theory

Economic theory was developed by Jensen and Meckling in 1976. The underlying assumption of the existing economic theory is that the motivation to invest in acquiring information is based on the expected effect of the investment on the party's share of the "contractual pie". A party invests in acquiring information in the pre-contractual phase on the basis of its belief that there is a high enough probability that some positive information will be revealed, and that information may enable it to receive or provide an asset, whose value (costs) is higher (lower) than the price paid (received). When a disclosure duty is imposed, the investing party bears the costs of acquiring information before the contract is formed but cannot extract the benefits, since the price would reflect the actual value of the asset (Jensen and Meckling, 1976).

In particular, this theory has been widely used by accounting researchers to explain and understand the voluntary disclosure phenomenon (e.g. Hossain et al., 1995; Meek et al., 1995; Haniffa and Cooke, 2002; Hossain and Taylor, 2007; Chen et al., 2008; Akhtaruddin and Hossain, 2008). A major link between economic theory and contemporary accounting thought is the notion that a firm's commitment to greater disclosure should lower the costs of capital that arise from information asymmetries and positively affect the firm value (Leuz and Verrecchia, 2000). A commitment to increased levels of disclosure reduces the possibility of information asymmetries arising between the firm and its shareholders. This, in turn, should reduce the discount at which firm shares are sold and, hence, lower the costs of issuing capital and increasing the firm value (Baiman and Verrecchia, 1996).

Economic theory advocates that increased levels of voluntary disclosures can reduce information asymmetries between the firm and market participants and, as a result, increase the firm's stock liquidity as well as enhancing firm value (FV) (Beyer et al., 2010).

Hypothesis development

The influence of CSR disclosure on firm value (FV) can be understood based on signaling, and economic theory. Signaling theory is the main theoretical framework that is used to explain the association between disclosure and firm value (FV). Based on this theory, comprehensive disclosure signals better CG mechanisms and fewer agency conflicts, thus leading to higher firm value (FV) (Sheu et al., 2010). It is argued that voluntary disclosures in the annual report send signals to the marketplace that are expected to increase a company's value and, consequently, its stock market value (Gordon et al., 2010). Curado et al. (2011) point out that corporate disclosure influences firm value (FV), as perceived by markets. Cormier et al. (2011) claim that, disclosure delivers value-relevant information to stock markets. Gallego-Alvarez et al. (2010) provided evidence that disclosure has a positive consequence on shareholder value creation.

Economic theory suggests that increased corporate disclosure has an influence on firm value (FV) (Lundholm and Van Winkle, 2006). First, better quality information permits investors to make accurate appraisals of the parameters underlying the future stock returns, lessening non-diversifiable estimation risk and uncertainty about future cash flows, as well as future profitability (Clarkson et al., 1996). Second, through enhanced disclosure, the willingness for investors to trade is increased in addition to increases in the shares' liquidity and improving firm value (FV) (Easley and O'Hara, 2004). Economic theory advocates that an increased voluntary disclosures level reduces information asymmetries between the firm and market participants, which increases the firm's stock liquidity as well as enhances firm value (FV) (Beyer et al., 2010). Therefore, based on the above theory, it can be hypothesized that:

H1: There is a positive relationship between CSR disclosure and firm value (FV).

Measuring Instruments for CSR Disclosure and Firm Value

Dependent Variables:

To measure CSR disclosure consequences for Islamic banks, empirical studies used different proxies in order to measure firm value (FV). The study uses three alternative dependent variables associated with firm value (FV) to test the hypothesis, which is consistent with several literatures (Sheu et al., 2010; Barontini and Caprio, 2006). The three measures have diverse theoretical implications (Hillman and Keim, 2001; Servaes and Tamayo, 2013). Selecting three proxies may support the researcher to construct the

holistic view of the impacts of disclosure on firm value (FV) through different proxies. Further discussion of firm value proxies as follows.

a) MTBV

In measuring the impact of CSRD to firm value, the current study used several indicators, such as market-to-book value of the companies. Prior studies used market-to-book value to reflect the market value of the firm compared with its book value (e.g., Hassan et al., 2009; Uyar and Kiliç, 2012). It is measured as the ratio of market value of equity to book value of equity. This ratio is a provide indicator of how a firm is valued by investors. If the ratio exceeds 1, it means that the firm is overvalued by investors and vice versa (Hassan et al., 2009). The market-to-book ratio is used by security analysts to determine whether a stock is undervalued or overvalued. If a stock is undervalued, the price is expected to rise. If it is overvalued, the price is expected to fall. Investors looking for value stocks often look for low market-to-book companies. According to Khelif (2015), MTBV can be calculated as follows:

Market-to-book = Share price of the stock / Book value per share

In this current study, the data of MTBV of the sample Islamic banks are collected from the DataStream database. To empirically investigate the relationship between firm value (using MTBV as a proxy) and CSRD in the Islamic banks, the study uses the following OLS regressions:

Model 1: Firm Value (FV) using MTBV as a proxy.

$$FV(MTBV)_n = \alpha + \beta_1 CSRD + \beta_2 B.SIZE_n + \beta_3 B.Comp_n + \beta_4 CEO Dual_n + \beta_5 F.Size_n + \beta_6 F.Profit_n + \beta_7 F.Leverage_n + \beta_8 C.GDP_n + Year\ dummy\ variable + \varepsilon$$

Where:

FV (MTBV) = firm value measured using MTBV as a proxy for the sample Islamic banks, also known as the dependent variable. Data gathered from DataStream database using data code: MTBV

α = the intercept

β_1 = Independent variables (CSR disclosure score of the sample Islamic banks)

$\beta_2 - \beta_8$ = Control variables (B. Size (board size), B. Comp (board composition), CEO Dual (CEO duality), F. Size (refers to Islamic banks size), F. Profit (refer to Islamic banks' profitability), F. Leverage (refers to Islamic banks leverage) and C. GDP (growth domestic product of the sample countries).

Dummy variable= the study uses year as a dummy variable

e = the error term, the difference between the predicted and observed value of the MTBV for the sample banks.

b) Market Capitalization (WC08001) or MC

Another variable in measuring firm value is market capitalization (WC08001). Market capitalization data of the sample Islamic banks was collected from the Data Stream database. In general, market capitalization represents the total dollar market value of a company's outstanding shares. Market capitalization is calculated by multiplying a company's outstanding shares by the current market price of one share. The investment community uses this figure to determine a company's size. As opposed to sales or total asset figures, this study uses MC, which is used in the corporate disclosure literature (Servaes and Tamayo, 2013).

To empirically investigate the relationship between firm value (using WC08001 as a proxy) and CSR in Islamic banks, the study uses the following OLS regressions:

Model 2: Firm Value (FV) using MC (WC08001) as a proxy.

$$FV(WC08001) = \alpha + \beta_1 CSR + \beta_2 B.SIZE + \beta_3 B.Comp + \beta_4 CEO Dual + \beta_5 F.Size + \beta_6 F.Profit + \beta_7 F.Leverage + \beta_8 C.GDP + \text{Dummy variable} + \varepsilon$$

Where:

FV (WC08001) = is the firm value measured using market capitalization (WC08001) as a proxy for the sample Islamic banks, also known as the dependent variable. Data gathered from Data Stream database using data code: WC08001

α = the intercept

β_1 = Independent variables (CSR disclosure score of the sample Islamic banks)

$\beta_2 - \beta_8$ = Control variables (B. Size (board size), B. Comp (board composition), CEO Dual (CEO duality), F. Size (refers to Islamic banks size), F. Profit (refers to Islamic banks profitability), F. Leverage (refers to Islamic banks leverage) and C. GDP (gross domestic product of the sample countries)

Dummy variable = the study use year as a dummy variable

e = the error term, the difference between the predicted and observed value of the market capitalization for the sample banks

c) Tobin Q (TQ)

According to the theoretical framework, a relationship is expected between CSR reporting quantity and firm value. Empirical studies used different proxies in order to

capture investors' reactions to the information disclosed. Adapted prior studies (e.g., Morck et al., 1988; Laporta et al., 2002; Lins, 2003; Haniffa and Hudaib, 2006; Hassan et al., 2009; Aggarwal, 2009), Tobin's Q ratio is used as a proxy to measure the dependent variable (firm value) in the main analysis. Tobin's Q, equal to the ratio of the firm's market value to the replacement cost of its physical assets (Morck et al., 1988, p. 296), or 'the ratio of the market value of assets to their replacement value at the end of the most recent fiscal year' (La Porta et al., 2002, p.1156). This ratio implies the investors' perception of the value of a firm by reflecting this perception on ratio's value. If the ratio is larger than one, it will refer to an improvement in that firm value, due to the efficient usage of its resources management and vice versa (Hassan et al., 2009).

According to Tjia & Setiawati (2012), Tobin's Q ratio can be defined as: Tobin's Q = (TMV+DEBT)/ TA. TMV is the total market value of the firm, comprising the market value of the common and the preferred stocks. DEBT is the book value of the firm's debt; in this study, the researcher used total firm liabilities (WC03351). TA (WC02999) is the book value of total assets. All data gathered from DataStream database. To empirically investigate the relationship between firm value (using Tobin Q as a proxy) and CSRD in Islamic banks, the study uses the following OLS regressions:

Model 3: Firm Value (FV) using Tobin Q (TQ) as a proxy.

$$FV(TQ)_n = \alpha + \beta_1 CSRD + \beta_2 B.SIZE_n + \beta_3 B.Comp_n + \beta_4 CEO\ Dual_n + \beta_5 F.Size_n + \beta_6 F.Profit_n + \beta_7 F.Leverage_n + \beta_8 C.GDP_n + Dummy\ variable + \epsilon$$

Where:

FV (TQ) = is the firm value measured using Tobin's Q (TQ) as a proxy for the sample Islamic banks, also known as a dependent variable. Tobin's Q ratio can be defined as: Tobin's Q = (TMV+DEBT)/ TA. TMV is the total market value of the firm, comprising the market value of the common and the preferred stocks. DEBT is the book value of the firm's debt. In this study, the researcher used total firm liabilities (WC03351). TA (WC02999) is the book value of total assets.

α = the intercept

β_1 = Independent variables (CSR disclosure score of the sample Islamic banks)

$\beta_2 - \beta_8$ = Control variables (B. Size (board size), B. Comp (board composition), CEO Dual (CEO duality), F. Size (refers to Islamic banks size), F. Profit (refers to Islamic banks' profitability), F. Leverage (refer to Islamic banks' leverage), and C. GDP (growth domestic product of the sample countries).

Dummy variable = the study uses year as a dummy variable

e = the error term, the difference between the predicted and observed value of the TQ for the sample banks.

d) Independent Variables

In examining the CSR disclosure consequences, this study used CSR disclosure score as an independent variable.

e) Control Variables

In addition to the above dependent and independent variables, as well as to avoid model misspecification, this study considers additional variables, which might also influence firm value (FV). Therefore, this study added variables concerned with CG (board size, board composition and CEO duality), firm characteristics (size, profitability, leverage), and country specific variables (GDP growth). This study also uses year as a dummy variable. Drawing upon agency theory, the broad objective of CG mechanisms is to align managers' interests with shareholders' interests. It is predicted that CG mechanisms motivate managers to enhance shareholders' value (Bruce et al., 2007). Ntim et al. (2012) found that good CG practices enhance firm value (FV). Thus, this current study considers several CG mechanisms as control variables on firm value (FV) such as: board size, board composition, and CEO duality.

Regression Model

This current study used 2-years data in measuring the association between dependent and independent variables. To test the hypothesis, this current study applies 3 OLS regressions, and the study employs the following regression model. The dependent variable is MTBV for model 1. As an alternative proxy for firm value, the study also uses the MC (WC08001) as dependent variable for model 2, and Tobin Q (TQ) in model 3. Independent variables include the aggregate CSR disclosure levels of sample Islamic banks.

Descriptive Statistics

It shows mean values of all variables used in measuring the consequences of CSR among a sample of 39 Islamic banks in the GCC from 2018 to 2019, involving 78 observations. It shows that, on average, Islamic banks disclose 39.92% of CSR information in the annual report. Moreover, the average natural logarithm of market value of equity to book value of equity (WC03501) ratio, or MTBV, is 1.5960. Meanwhile, the average market capitalization (WC08001) of the sample Islamic banks is 6.3477. Mean Tobin Q ratio for GCC Islamic banks is 81.02%. For the control variables, the mean number of board size is 9 people, while the average composition between executive and non-executive board is 33%. On average, 18 banks have the problem of CEO duality. Other control variables are average firm size (3.5987), firm

profitability (8.22), firm leverage (110.423), and GDP (10.8787). Table 1 provides the descriptive statistics of all variables used in this study.

Variables	N	Minimum	Maximum	Mean	Std. Deviation
MTBV	78	0.30	6.79	1.5960	1.11883
WC08001	78	3.92	8.17	6.3477	0.94080
TOBIN Q	78	0.00	0.93	0.8102	0.14803
CSRD	78	0.09	0.73	0.3992	0.13026
B.SIZE	78	4.00	16.00	9.1538	2.24227
B.COMP	78	0.10	0.75	0.3386	0.12557
CEO.DUAL	78	0.00	1.00	0.1795	0.38475
F.SIZE	78	1.10	5.84	3.5987	1.05947
F.PROFIT	78	-127.15	24.19	8.2287	14.12631
F.LEVERAGE	78	0.04	771.16	110.4239	108.22184
C.GDP	78	10.32	11.72	10.8787	0.48287
Y2018	78	0.00	1.00	0.2000	0.40103
Y2019	78	0.00	1.00	0.2000	0.40103

Table1: Descriptive Statistics

Normality, heteroscedasticity, multicollinearity, and autocorrelation

This research is conducted among the GCC sample Islamic banks, consisting of 78 observations throughout the years 2018 to 2019; it employs a large amount of data that can be assumed to have a normal distribution. Therefore, this study used the parametric method. In addition, Gujarati and Porter (2009, p. 100) asserted that the normality assumption is not crucial for large data. Meanwhile, since the number of Islamic banks is only 39, it must be tested by normality. This study conducts the Kolmogorov-Smirnov test to ensure that the data are normally distributed. Based on that test, the study finds that all data is normally distributed. The result of the normality test for Islamic banks.

Empirical analysis

Appendices 1, 2 and 3 present an empirical analysis of CSR disclosure consequences of Islamic banks in the GCC. The results of the regressions can be interpreted in accordance with the main hypotheses developed in this study. The results show a negative and significant relationship between firm value and CSR disclosure score. This result is consistent with prior research, such as Elliott, Jackson, Pecher and White (2014), who show that CSR disclosure is negatively associated with firm value. However, according to Klein et al. (2005), firm value rises with greater social disclosure

and is expected to have a positive impact on the firm value. Previous studies (Sheu et al., 2010; Gordon et al., 2010) pointed out that social disclosure has an impact on firm value based on signaling theory, but the study finds a contradictory effect between CSR disclosure and firm value.

Using market capitalization as a proxy of measuring firm value, the study finds a negative significance between firm value (using market capitalization as proxy) and CSRD, a level of 90% (0.090). The results are contradictory with studies by Anam et al. (2011), who proved that the extent of disclosure has a significant positive effect on the firm value (FV) based on market capitalization. It is in line with a finding of other prior studies (Healy and Palepu, 1993; Hassan et al., 2009; Chung et al., 2012), which claimed that enhanced disclosure could have adverse effects if it puts the firm at a competitive disadvantage with its rivals, or if it makes more noise to the investors, which affects negatively on their valuation. Therefore, the existing literature does not present strong evidence on the positive association between corporate disclosure and firm value. Furthermore, they also find that the direction and magnitude of the relationship is associated with the type of disclosure (Hassan et al., 2009) and the proxy that used for firm value (Uyar and Kiliç, 2012).

Based on the result, it can be claimed that disclosure cannot curtail agency problems by decreasing information asymmetry and, as a result, enhance the firm value (FV) as argued by Rhodes and Soobaroyen (2010). It is also contradictory with economic theory's assumption, which argues that increased corporate disclosure has an influence on firm value (FV) (Lundholm and Van Winkle, 2006). The result also contradicts the signaling theory assumption, as claimed by McDonald and Rundle-Thiele (2008), who find that the influence of CSR on the corporate profitability through creation of intangible assets such as good reputation, trust, and commitment, drives the long-term success of the business. Consequently, H1 – which expects that there is a significant positive relationship between the quantity of CSR disclosure and firm value (FV) of the sample GCC Islamic banks – is rejected.

CONCLUSION

The aim of this research is to examine the level of CSR disclosure quantity and its consequences among the 39 sample Islamic banks in GCC through 78 observations from 2018 to 2019. Based on the analysis, it shows that the level of CSRD among the sample GCC Islamic banks is relatively low (39.92%). It is consistent with El-Halaby & Hussaney (2015), Hassan et al., (2012), Haniffa & Hudaib (2007), and Maali et al. (2006), who also find very low levels of CSR disclosures by Islamic banks.

This current study also analyses the impact of CSR disclosure on firm value (FV) based on three different proxies, namely market-to-book value (MTBV), market capitalization (WC08001) and Tobin's Q (TQ). After controlling CG, firm characteristics and country specific variables, the research's finding confirms the significant negative association between disclosure and firm value (FV), based on market capitalization proxies, which is consistent with a finding by Chung et al. (2012) and Hassan et al., (2009).

This current study also provides several theoretical arguments and a range of empirical evidence as to why such an association might arise. The negative link between disclosure and firm value (FV) prove the inconsistency of prior findings, which build on the agency theory framework. Furthermore, the negative effect of CSR disclosure can be explained from different angles. Firstly, in consistence with Chung et al. (2012), extra information could have a negative effect on firm value; the excessive CSR information disclosed may cause extra noise to the investors, which affects negatively on their valuation of the firm. Secondly, the negative effect on firm value could be driven by the content of the CSR information disclosed and how investors perceive it. There is a possibility that CSR information itself raises concerns about firm performance, which leads investors to lower their valuation. In that proposition, the more CSR information disclosed, the higher the possibility that the firm value will decrease. In contrast, CSR information could offer positive news to the stakeholders, but this news might be under their own expectations or might be suspicious because it is very different from information gained from sources other than the annual reports. Accordingly, the more CSR information disclosed may result in a drop in firm value. Thirdly, stakeholders might misinterpret this practice from the firm to disclose more CSR information. They might perceive providing enhanced disclosure to mislead them about the firm's performance. The investors might also consider that the company's rivals would benefit from this excessive critical information, which can affect negatively on their expectation about firm's performance and, hence, lower their valuation (Hassan et al., 2009). This result is not consistent with finding by Gelb and Zarowin (2002), who find that firms with high disclosure are more likely to show a stronger firm value (FV). In addition, the result related to CSR disclosure shows an adverse impact of the socially responsible firm, which corresponds with social issues and firm value (FV). This result also does not support the idea that Islamic banks can use corporate disclosure to differentiate themselves and enhance their competitive advantage through increasing firm value (FV) for Islamic banks.

The finding of the study provides important implications for investors, managers, regulatory bodies, policy makers and Islamic banks. This result tells investors that CSRD has a negative effect on market value of their banks, based on market capitalization, but proxies used to examine the consequences of CSRD may provide different results, as stated by Alotaibi and Hussainey (2016). However,

managers who engage in good practices of information disclosure recommended continuing doing so. For those who refrain themselves from providing information to the stakeholders, the results call for more CSR transparency if they want their bank to be more valuable in the eye of their stakeholders. Regulatory bodies, such as the AAOIFI, are expected to be more proactive guiding Islamic banks toward the best practices of disclosures, since banks look for such guidance. They play a motivating role in this area of information disclosure. The AAOIFI are also expected to have a strong collaboration with countries' regulatory bodies in enhancing CSR disclosure practice among Islamic banks.

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THE CHALLENGES OF FRAUD TO LAND ADMINISTRATION SYSTEM IN MALAYSIA

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Abstract

Landowners might be wondering why land fraud cases keep cropping up notwithstanding efforts and measures towards its prevention has been continuously implemented and monitored. Transition from paper-based to computerised land administration system with the implementation of the Computerised Land Registration System and e-tanah pave opportunities for new form of land fraud. The unpleasant truth is the more sophisticated the system, the more inventive the fraudsters can be. This paper seeks to analyse the challenges of fraud in land administration system by examining modus operandi in land fraud through selected decided cases. The research employs a doctrinal legal approach by examining authoritative legal texts and decided cases to analyse the issue. The findings from the analysis recognise that systematic fraud preventive actions are necessary in combating land fraud, and this include risk mitigating instruments in the form of land title assurance fund. Maqasid Syariah in its approach also emphasises preservation of integral pillars to redress the challenges of fraud in Malaysia.

Keywords: *Torrens system, fraud, assurance fund, maqasid syariah*

INTRODUCTION

Landowners might be wondering why land fraud cases keep cropping up notwithstanding efforts and measures towards its prevention has been continuously implemented and monitored. Transition from paper-based to computerised land administration system with the implementation of the Computerised Land Registration System and *e-tanah* pave opportunities for new form of land fraud. The unpleasant truth is the more sophisticated the system, the more inventive the fraudsters can be. Land fraud may happen in countries with efficient land registries, trained staff, and strong regulatory authorities as well as the transitional countries that adopted the system within the last 40 to 50 years where techniques of fraud may be different (Gunasekara,2008). Besides, fraud may occur in manual or paper-based land administration or a combination of manual and paper-based administration or fully electronic land administration (Low, 2006). Even though there is no solid data to show

that fraud in land registration system has been increased with the introduction of electronic land administration system, but it provides new opportunities of fraud which is not viable in the paper-based system. (Low, 2006 and Low, 2008). Land fraud does not only cause financial losses to the victims but eventually affect the public confidence in the system runs by the government (Hanstad, 1998; Siti Radiaton and Khadijah, 2013). This paper seeks to analyse the challenges of fraud in land administration system by examining modus operandi in land fraud through selected decided cases. The findings from the analysis recognise that systematic fraud preventive actions are necessary in combating land fraud, and this include risk mitigating instruments in the form of land title assurance fund. These measures are coinciding with the objective of Syariah to uphold the rights to property and prevent any form of injustice and wrongful deprivation of property. Secure land tenure is one of the key elements towards sustainable development goals. The research employs a doctrinal legal approach by examining authoritative legal texts and decided cases to analyse the issue.

LAND FRAUD

In Malaysia, land registration system is based on the Torrens system which requires transfer of title and interest in land is affected by way of registration at the land office. The procedures for registration of dealings are provided in the National Land Code 2020 (Act 828) (NLC). By virtue of section 340 of the NLC, registration confers indefeasible title or interest to the person duly registered unless there are vitiating factors such as fraud, forgery, misrepresentation, void, and insufficient instruments in the registration process. (Section 340 (2) NLC). If the registration of dealings is tainted with these vitiating factors, then the title or interest of the immediate person who acquires the land is defeasible and can be challenged. However, once the land is transferred to a subsequent *bona fide* purchaser without knowledge of the fraud or other vitiating factors, then the right of the original owner is defeated by the right of the *bona fide* purchaser. This principle is known as deferred indefeasibility of title (O Connor, 2009). Consequently, the original owner, a victim of fraud, needs to recover the losses against the fraudsters which were normally in vain.

Fraud essentially involves using deception to make dishonest personal gain for oneself or to create a loss for another (Sharifah, 2008). Land fraud occurs when a fraudster attempts to or succeeds in inserting changes in the land register through fraudulent activity, with the goal of making some financial gains through criminally acquired property or interest in property (UNECE, 2011). Even if there aren't many incidents of land fraud in Malaysia, the fact that they do occur occasionally shows that the system is at risk. The infamous fraud case of *Adorna Properties Sdn. Bhd. v Boonsom Boonyanit @Sun Yok Eng* [2001] 1 MLJ 241 had raised great concern among public on the security of the land registration system in this country.

In the Torren system, the act of registration is done by the registrar or the land administrator by following the specific procedures provided in the statute (Section 88, 89 and 304 of the NLC). In many cases fraud happens due to the failure of staff at the land registry to adhere to the standard operating procedures at the land registry such as procedures to replace lost certificates of title or issuance of new title, negligence in the identification and verification procedures as well as use of certification clause (Noraida et al. 2013 and Ainul Jaria & Hunud, 2010). Besides, poor security measure in the implementation of computerised land administration system is also one of the factors that allows fraud to be committed in the land dealings (Syukri et. al, and Noraziah, 2019). Hunud (2008) identifies lack of systemic updating of the records and the lack of follow ups on the part of the registered proprietors of their property for long periods of time has facilitated the wide spreads of the land fraud. Besides, loopholes in the conveyancing procedures) also contributes to the factors. For example, there are prevailing practice in conveyancing firm in allowing their staff to oversee conveyancing matters in the absence of close supervision by lawyers (Noraziah, 2019) Fraudsters may use identity theft to induce lawyers into believing that they are genuine clients. This is done by producing genuine looking, but a fake identity card or a fake passport. In the case of *Anthony Ting Chio Pang v Wong Bing Seng & Anor [1997] 2 CLJ 831*, it was also held that the solicitors were negligent in failing to properly ascertain the true identity of the person who claimed to be the owner of the land. In the case of *Lau Teck San @ Lau Beng Cheng & 3 Ors v SK Song (1995) 2 CLJ 425 (HC)*, the court held that an attesting solicitor would be liable for professional negligence and or breach of an implied warranty of authority in the event the transferor turns out to be an imposter.

In several reported cases, land fraud is committed by forging the signature of the original landowner on instruments of dealings such as Form 14A, Form 16A and Form 16N. Apart from that, forged documents such as power of attorney, court order and distribution order are used to facilitate fraud. In the case of *The Bank of Nova Scotia Bhd v Saunah Kasni & Ors (2016) 1 CLJ 505*, the fraudsters had used forged discharge of charge and memorandum of transfer to execute the fraud. Notwithstanding the actual original title of the land was deposited at the high court for the purpose of the auction, the existence of three issue documents of title on the same land issued by the 3rd defendant (the Registrar of Land Titles, Selangor), make it possible for the fraudster to discharge the charge of the original chargee and affected the transfer in favour of the 2nd defendant and subsequent charge in favour of the 4th defendant. The court ordered the land to be reinstated in favour of the original chargee and declared the subsequent transfer and charge were invalid because the registration of the instrument of transfer and charge were affected through forged documents. The court concluded that 3rd defendant was negligent in failing to exercise due care and skill in issuing different version of the issue document of title to the said Land. In *Soon*

Poy Yong @ Soon Puey Yong v Westport Properties Sdn. Bhd & Ors [2015] 11 MLJ 1961 the fraudster used a forged power of attorney and a fake land title to affect multiple transfers of the land. The original landowner lost the property to the *bona fide* purchaser for valuable consideration who is protected under the proviso to section 340 (3) of the NLC.

In *Kamarulzaman bin Omar & Ors v Yakub bin Husin & Ors [2014] 2 MLJ 768*, a fraudulent transfer of a deceased's properties by third parties was made through order of distribution under Small Estates (Distribution) Act 1955 without the knowledge of the legitimate beneficiaries. The court ordered the undivided shares of the deceased in the said Land to be restored to the estate of the deceased on the register. In this case, the *bona fide* purchaser becomes the victim of land fraud and need to recover their losses from the perpetrators. In *Pendaftar Hakmilik, Pejabat Tanah dan Galian Selangor v Bank Pertanian Malaysia Bhd [2016] 2 MLJ 543*, a fraudulent land dealing was executed by a fake company which fraudulently used forged documents to change the records of the true owner at the Suruhanjaya Syarikat Malaysia before executed the fraudulent transfer. The land was transferred to a purchaser who subsequently charged to Bank Pertanian Malaysia Berhad as a security for the loan granted to part finance the purchase of the land. The court ordered the land to be re-registered in the name of the original owner and consequently the transfer in favour of purchaser and the charges in favour of the bank were struck off and removed from the register. The bank's claim against the land registry for negligence and breach of statutory duty was futile because the court was of the view the bank failed to establish the elements of negligence and bad faith on the part of the land registry.

A replacement title was sometimes used in fraudulent land transactions. In *Rajamani Meyappa Chettiar v Eng Beng Development Sdn. Bhd & Ors [2016] 4 CLJ 510*, an imposter conducted the land dealings by using a replacement title while the original title at all material times is in the custody of the original owner. The court ordered the land to be reinstated in the name of the original owner on the ground that existing title remained valid and indefeasible rendering the replacement title *void ab initio* and had no legal effect and was incapable of conferring indefeasibility. The land administrator (the 5th and 6th defendants) was grossly negligent for failure to follow statutory procedures prior to issuing the replacement title pursuant to section 421AA of the NLC. The court also found the 5th and 6th defendants were negligent when they registered the transfer despite the existence of the plaintiff's private caveat.

Land fraud had also taken place during the conversion of title from manual to computerized title. In the case of *Uptown Properties Sdn. Bhd. v Pentadbir Tanah Wilayah Persekutuan & Ors [2012] 8 MLJ 713*, the real landowner discovered that in the course of a computerisation exercise carried out by the land office in 1993, the 4th defendant had become the registered proprietor of the land in dispute. This happened

due to the 1st defendant's (Pentadbir Tanah Wilayah Persekutuan) mistake in typing the name of the 4th defendant instead of the plaintiff resulted in the 4th defendant being issued with the computerised document of title to the said land. The land office failed to comply with the 14th schedule of the NLC which requires a notice to be sent to the original landowner to surrender the old title in exchange for the new computerized title. The court held that the title which is wrongly issued in the 4th defendant's name is void. Similar incidence occurred in the case of *Shayo (M) Sdn. Bhd. v Nurlieda bt Sidek & Ors [2013] 7 MLJ 755*. During the conversion process from the manual title to computerised title by Perak land office, the computerised title of the land owned by the Plaintiff was wrongly issued in the name of the 1st defendant. Thereafter, the land had undergone series of transfer where the 7th defendant in this case was the last registered owner of the land. In the instant case, the evidence showed that there were gross negligence and breach of statutory duties by the registering authority in regard to the issuance of the computerized title. The registering authority had failed to ensure reasonable and adequate security to their computer system against hacking and internal fraud. Since the computerized title was *void ab initio*, the court ordered the title to be restored to the plaintiff. The 7th defendant was entitled to be indemnified by the registering authority against the losses suffered including the whole purchase price and other reasonable expenses incurred following the cancellation of his title.

Another aspect that contributes to the commission of fraud is negligence on the part of the land office. In *Malayan Banking Berhad & Ors v Tho Siew Wah & Anor [2017] MLJU 119*, The land title was cancelled by the 4th defendant, Pendaftar Hakmilik Negeri Selangor because of a re-delineation of boundary exercise. The newly issued title was collected by a person impersonating as the original landowner. The Registrar of Titles, Selangor admitted that there was no notice sent to the original landowner requiring the old title to be surrendered nor no notice was issued to the original owner to collect the newly issued title. The land was sold by an individual using the plaintiff's name and identification number ("the fake seller") to the 1st and 2nd defendants and the land was charged to Malayan Banking Berhad ("the 3rd defendant") in consideration of the loan granted to the purchasers to part finance the purchase of the land. The Court of Appeal concurred with the findings of the High Court that the 1st and 2nd defendants being the immediate purchasers of the land did not acquire indefeasible title since the transfer was obtained through forgery. The charge in favour of the 3rd defendant was also set aside on the ground that the 3rd defendant, even though was a subsequent purchaser, was not a *bona fide* purchaser for value without notice. This is due to the conduct of the 3rd defendant's lawyer who the court considered as being careless and negligent.

The effect of the registering authority's inability to keep correct registers which jeopardise the public interest is shown in the case of *Pendaftar Hakmilik, Pejabat Pendaftaran Wilayah Persekutuan Kuala Lumpur & Ors v. Poh Yang Hong [2016] 9*

CLJ 297. In this case, the purchaser entered into a sale and purchase agreement to buy a piece of land in Kuala Lumpur from the vendor. Towards the end of the transaction, the purchaser discovered that the land concerned was held under a different title number and was registered under a different owner. The purchasers filed a claim against the land registry for the tort of negligence. The land registry breached their duty of care to the purchaser by misrepresenting the true and actual particulars of the land and failed to maintain true and accurate records.

The case of *Lau Yong Ying v. The Bank of Punjab & Ors and Other Appeal [2018] 8 CLJ 446* is another striking illustration of the effect of failure on the side of the land registry to maintain accurate record. In this case, the purchaser purchased an auction land, without a notice that the land was subject to a vesting order under Anti-Money Laundering and Anti-Terrorism Financing Act 2001 (AMLATFA) due to the failure of the registering authority to endorse a notice of seizure on the title to the property. The transfer of the land in the name of the purchaser was defeasible because section 54 of the AMLATFA expressly provided that if the seizure remains in force, any dealings remain null and void.

The above cases indicate that the challenges of fraud in the land administration system are alarming. The perpetrators used various methods to overpass the system which includes identity theft, used of forged and fake documents and fake titles. In most of the cases, the fraudsters were assisted by the family members, lawyers, staff of legal firms and land office officers. As the final gatekeeper of the registration process, it is concerning to note that many incidents entail carelessness and errors on the side of the registering authority. It is high time for the government to come out with certain guidelines on the good practices in detecting and preventing fraud in Malaysia.

DISCUSSION AND RECOMMENDATION

Fraud in land transactions is difficult to combat for a variety of reasons. One of them is the difference in state practices, which make it difficult to understand the rules and requirements and, as a result, makes it difficult to detect fraud. Furthermore, it is difficult for the land registry or land office staff to identify forged signature or documents due lack of expertise and resources unless they are alerted by relevant parties. In addition, under the NLC, the registrar's duty during the registration process is essentially administrative, therefore they are not required evidence disproving fraud or unlawful dealings when nothing in the submitted documents suggest it, nor to inquire into unregistered interest (Syukri,2011, Ainul Jaria & Hunud, 2010, Chai, 2008).

In addressing this issue, the government need to have strategies in place to guard against the risk of fraud. Currently, the government had implemented several measures such as the implementation of system known as SELAMAT wherein the biometric of the individual or representatives of legal firms will be recorded by the land office to ensure only the authorised person deals with the presentation and registration process. This paper recommends the following measures for good practices in fraud prevention measures:

- i) To use procedural check and control to prevent fraud particularly the accuracy of records at the land office, the process, and procedures for issuance of computerized title and replacement of title. The system should be able to detect fraud or malpractices at early stage and can be quickly rectified.
- ii) To notify landowners of any red flag transactions through electronic notification such as WhatsApp or SMS.
- iii) The security measures in the computerized land registration system must be tightened to avoid misused of access code and tampering of records (UNECE, 2011).
- iv) The government also need to invest in the capacity building of land office staff by training dedicated counter-fraud staff who continuously monitor and report on fraud and measures taken to counteract it (Syukri, 2011).
- v) Creating an anti-fraud culture among all land registry staff is important in preventing the external fraud. All staffs are required to understands the standards of conduct required in handling their day-to-day job (UNECE, 2011)
- vi) Conveyancing lawyers must also be continuously reminded to verify the identity of the parties in a land transaction particularly their client and to witness the signing of all instruments of dealings before attesting the signature. In Singapore, attending solicitor is required to provide certificate of correctness by the attending solicitor to make sure the documents presented has been verified and checked by the solicitor in charge. Failure to do so would make them liable for professional negligence. (Section 59, Singapore Land Title Act (Cap 157) (Act 27 of 1993).

It is time for the government to seriously explore a protective measure in the form of a compensation scheme to provide statutory indemnity to the fraud victims who are unable to pursue their remedies against the wrongdoer, in addition to the

preventive measures that need to be continuously reviewed and upgraded (Salleh, 2008 & Syukri el at, 2013). By having such scheme, any person who has been deprived of their title or interest in land or suffered loss due to mistakes of the land registry or wrongful acts of third parties may claim their compensation from the fund established by the government. The scheme also works as acknowledgment of responsibility by of government for the loss incurred by the public due to the malfunction of the land registration system runs by the government (Flaws; 2003). The existence of a compensation scheme for land fraud victim helps in building public trust in the land registration system which is very important to enable land and property market to function effectively (Siti Radiaton, 2013). Besides that, the existence of compensation scheme will expedite the resolution of land disputes because the losing party may claim their indemnity from the compensation scheme.

A compensation scheme or assurance fund is a crucial component of the Torrens system that supports the idea of indefeasibility of title that the Torrens system promotes. Many jurisdictions that use the Torrens system, including Australia, Canada, New Zealand, and Singapore, have put it into practise. The British government did not, however, implement the concept into Malaysia's land registration system since at the time, there were few recorded examples of fraud and few land transactions (Wong, 1963, Dass, 1963 and Judith 1981). With the nation's growth and an increase in land transactions, fraud incidents are bound to occur occasionally. The need to have a compensation scheme or assurance fund introduced in Malaysia has been suggested by many scholars and researchers (Habibah el at, 2012, Salleh, 2013, Syukri el at, 2013, Noraida el at, 2017, Siti Radiaton, 2013). This is further strengthened by the court observations in several cases which pointed out the necessity to have such fund to remedy innocent parties in a land fraud case. Richard Malanjum CJ in the case of *Pushpaleela R Selvarajah & Anor v Rajamani Meyappa Chettiar & Others Appeal* [2019] 3 CLJ

“As the law now stands, our Code unfortunately, provides absolutely no remedy to innocent parties who are deprived of their lands due to fraud or forgery. It is high time for the relevant authorities to consider, as done in other jurisdiction, with the Torrens system of land registration, to establish a statutorily assurance fund to mitigate the losses suffered by registered owners because of fraud or forgery. The Torrens system ought to be implemented fairly and the relevant authorities must seriously look into amending the code to cater for an effective assurance fund”.

The assurance fund is based on two models (Caruthers and Skead, 2011). The original approach, known as the "Last Resort Model," was established by Sir Robert Torrens in South Australia. It requires the deprived party to exhaust all avenues before applying to the fund for

compensation. The basis for the Last Resort Model is that the deprived party is under a duty to protect their land and thus the burden is placed on them to pursue the wrongdoer. The compensation fund only operates as a last resort fund upon failure to get indemnified from the wrongdoer. Whereas the second model known as the 'First Resort Model' allows the deprived party to claim directly to the land registry without the need to file action against the wrongdoer. The registrar has the power to decide as to whether the claimant is entitled to the compensation. If the registrar determines that the claim is valid, the registrar can award the claimant indemnification for his loss together with reasonable expenses of bringing the claim. Consequently, the registrar is subrogated to any rights the claimant has against any wrongdoer.

The foundation for the 'First Resort Model' is that the fund should be operated purely on insurance principle to remedy any loss incurred due to the malfunction of the system. As such it is not necessary to prove any faults or mistakes of any parties. Comparatively, access to the fund is speedier and less onerous under the "First Resort Model" than it is under the "Last Resort Model." (NSW Law Reform Commission, 1989). To ensure there aren't any case floodgates, fraud prevention strategies must be successful before putting the "First Resort Model" into practice.

Any measures towards prevention of fraud are corresponding with the objectives of shariah to protect wealth (Nor Asiah, 2015). In Islam, this is done through various methods such as regulating the contracts of dealings, prevention from acquiring wealth through illegal means and prohibition of any form of devaluing or overpricing of commodities. Similarly, severe punishment awaits those who transgress the property of others such as the offences of theft, embezzlement, fraud, or extortion (Asyraf Wajdi and Said Bouheraqua, 2011). Furthermore, the provision of assurance fund to mitigate the risks in land dealings is consistent with the practice of *takaful* or Islamic insurance which is to provide joint guarantee and collective assurance among the contributors of the scheme. (Mohd Ma'sum Billah, 2003). Thus, the concept of *maslahah mursalah* (consideration of public interest) can be the ground for the establishment of an assurance fund in Malaysia.

CONCLUSION

Minimizing the incident of fraud and forgery in land dealings must be one of the government main agenda of land administration reform. Thus, all preventive measures and counter-fraud strategy must be systematically reviewed, evaluated, and

improved from time to time to ensure the agenda is accomplished. In the interim, a compensation plan needs to be incorporated into Malaysia's land administration system so that victims of land fraud can receive the appropriate compensation. All of these are crucial components for ensuring land tenure security and effective land management to achieve the 2030 Sustainable Development Goals.

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A SYSTEMATIC REVIEW OF FLIPPED CLASSROOM IN ARABIC LANGUAGE TEACHING

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Abstract

In general, the objective of this study was to evaluate and identify the main findings and trends of the studies and researches on the use of the flipped classroom method in the field of Arabic language teaching. Therefore, a number of databases including Google Scholar, Web of Science, Scopus, and ERIC were used for acquiring a number of relevant studies. After screening the obtained studies, 7 journal articles were selected and reviewed with the use of the content analysis technique. It was revealed by the findings and trends of the studies that the use of the flipped classroom method has a number of benefits for both instructors and learners in teaching the Arabic language. In the last few years, the interest in the use of the flipped classroom method has increased to a significant extent. Still, it has been identified that there are a number of challenges associated with the technique. When these challenges are overcome, it would be possible to deliver optimal benefits to students and learners. All the studies involved in the systematic review indicated and affirmed the effectiveness of the technique.

Keywords: Systematic review; Arabic language; flipped classroom, Arabic language teaching.

INTRODUCTION

In recent times, technology has advanced to a significant extent. In fact, it has penetrated almost every sector and part of life and education is not an exception. With the evolution of technology in education, there is no doubt that different learning approaches have emerged and flipped classroom is one of them. As a unique learning approach, it is revealed by literature that the flipped classroom method has been utilized in a number of fields including teacher education, statistics, mathematics, and even engineering. In addition to it, the flipped classroom technique has become quite an interesting topic in the field of language teaching (Sivarajah, et al., 2019).

In general, the flipped classroom is an education technique in which instructions and homework are swapped and learning occurs beyond the class itself. In fact, in a flipped classroom, the new and relevant information is transferred and conveyed to students when they are out of the classroom, mostly through the use of videos. Students, in the classrooms, engage in different hands-on practices and activities under the guidance of an instructor. It is worth noting that a flipped

classroom offers an opportunity for active student participation and even encourages the establishment of an interactive and engaging learning environment (Hooks, 2014).

Students are provided with videos prior to the courses, which enable them to learn and acquire information at their own pace as they are capable of replaying, rewinding, and pausing the videos. There is no doubt that a flipped classroom generally delivers flexible instructional time, enables a deep study of concepts, and develops an interactive and dynamic environment. In addition to it, to date, different studies have indicated that the flipped classroom method contributes to learning and academic achievement, reduces the cognitive load of a student, and raises student engagement (Brown & Lee, 2015).

It is widely recognized that the acquisition of a language requires significant practice, patience, and time. In fact, for effective results in acquiring a language, students should be capable of engaging in a number of activities and acquiring a better understanding of a language. Due to limited classroom time, however, there is a limited opportunity for practicing and teachers might be required to skip some important parts of effective language teaching. On the other hand, the flipped classroom method is capable of contributing to learning outcomes through the limitation of instructions outside the environment of the classroom and offering space for additional activities and practices in the classroom (Dörnyei & Ushioda, 2013).

The flipped classroom technique is considered beneficial in teaching a language as it encourages two important aspects of success including autonomy and student-centered learning. It has been argued by Chen, Wu, and Marek (2017) that the flipped classroom technique generally offers an effective learning environment to students that are necessary for students. In addition to it, it generally offers a number of benefits to students. In another study by Boyraz and Ocak (2017), it was identified that the flipped classroom model is quite effective in enabling students to learn and understand a language. In addition to it, it was identified that the technique is superior to other traditional techniques. Amiryousefi (2017) performed research for the determination of the effect of the flipped classroom technique on the listening and speaking skills of learners. It was revealed by out-of-class engagement and participation that the method affects the learning process of students in a positive manner.

In spite of the increasing interest and attention to the flipped classroom method, it is worth noting that there exists a lack of detailed investigation about the efficiency of this technique in language learning and acquisition, particularly for the Arabic language. Even though there are several research studies on the flipped classroom method, there are insufficient studies that actually focus on the use of the flipped classroom technique for Arabic language learning. Therefore, this research is of great

significance as it performs a systematic review of the studies that have been performed or associated with the use of a flipped classroom method in the context of the Arabic language. Based on the review of studies, the following are the research questions that are sought:

RQ1: What are the general trends in flipped classrooms in the context of Arabic language teaching?

RQ2: What are the key findings acquired from the available literature?

METHODOLOGY

In this research, a systematic review technique is utilized. A literature review is developed on explicit research questions that determine and identifies, through systematic methods, the studies that need to be considered. It is worth noting that from systematic literature reviews, the findings and results of previous studies can be assessed and checked for generalizability and consistency to other fields. The key difference that exists between a literature review and a systematic review is generally the method considered. For instance, the systematic review begins with a well-detailed and organized manner with a search for different journal articles. On the other hand, a literature review is carried out in a less systematic manner and the research articles are acquired from limited databases (Clough & Nutbrown, 2012).

Data Collection

On 13 March 2022, systematic research was performed in several databases including Google Scholar, Web of Science, Scopus, and even ERIC. These databases were selected and explored as they are recognized for containing the highest number of studies associated with education and language. A number of terms were considered for searching and identifying articles. These terms included "Arabic language and flipped classroom," "Flipped learning and Arabic," "flipped Arabic learning classroom," "Arabic learning and flipped classroom," and "inverted classroom and Arabic language." From the results of these searches, different credible research articles and studies were considered and acquired.

Data Analysis

In this research, all the research studies were assessed and examined by the researcher. Content analysis was used by the researcher for a comprehensive analysis. It is a method that is utilized commonly for textural analyses and enables the categorizing, contrasting, and comparison of data. First of all, a form was created for recording the results and outcomes of the analysis with the use of MS Word. It involved different categories associated with the research questions. The form was filled out after deeply

studying the articles. From the different databases, 139 studies were acquired. Once these studies were analyzed and refined, 12 research studies were involved in the review after exclusion. These studies were further checked for eligibility, relevance, and bias. Once it was confirmed that the studies were suitable, they were involved in the systematic review.

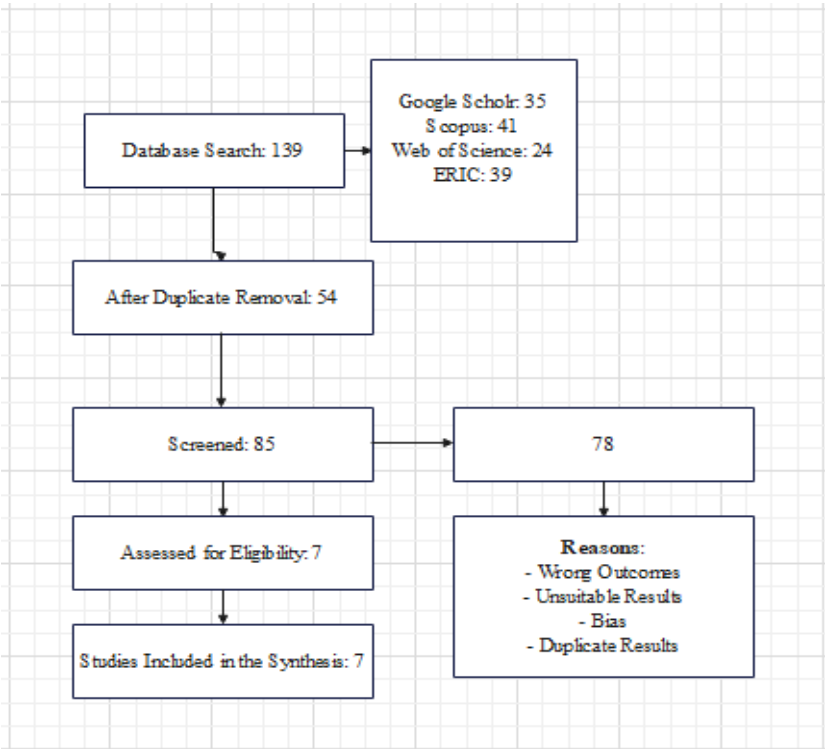


Figure 1: Systematic Review Process (Created using EDDraw)

In this research, 35 research studies were acquired from Google Scholar. 41 studies were acquired from Scopus, 24 studies were obtained from Web of Science, and 39 research articles were obtained from ERIC. These studies combined to make 139 studies that were obtained from databases. Once the studies were checked for duplication, 54 studies were excluded because they showed and exhibited duplication. It led to 85 remaining studies and once they were screened, 78 studies were excluded or not involved in the assessment. The key reasons why these studies were excluded are the duplication of results, bias, unsuitable results, and wrong outcomes. Due to these reasons, 78 more studies were excluded after which, 7 studies remained.

FINDINGS

Trends in Flipped Classrooms and Arabic Language

For the identification of trends prevalent in the research articles, a deep analysis was performed and the research studies were not only explored but analyzed in a

comprehensive manner. Through the study of these articles, the following benefits are identified:

Advantages	Articles
Improvement in Engagement of Learners	Ruzman (2020); Jwaifell, Abu-Omar, & Al-Tarawneh (2018)
Improvement in Speaking Skills	Zainuddin (2016)
Improvement in peer engagement	Islieh, Jailani, Zakaria, Zainuddin, & Theis (2022); Ruzman (2020)
Encouraging Participation	Albahuoth (2020)
Improvement in Writing Skills	Tang, et al. (2020)
Improvement in Grammatical Skills	Aburezeq (2020)
Improvement in Vocabulary Skills	Jwaifell, Abu-Omar, & Al-Tarawneh (2018)

Table 1: Benefits of Flipped Classrooms in Arabic Language Teaching

Key Findings

In order to answer the second research question, a number of subcategories were not only defined but also explored. For instance, the key findings were determined and the same applies to challenges. Both the challenges and the key findings are summarized in the tables below.

Challenges	Articles
Unfamiliarity with the concept	Ruzman (2020)
Technological issues	Islieh, Jailani, Zakaria, Zainuddin, & Theis (2022)
Writing anxiety	Islieh, Jailani, Zakaria, Zainuddin, & Theis (2022)
Lack of readiness to accept the method	Ruzman (2020)

Table 2: Challenges with the Use of Flipped Classroom Method

Findings	Articles
Flipped classroom is more effective	Ruzman (2020); Jwaifell, Abu-Omar, & Al-Tarawneh (2018); Zainuddin (2016); Islieh, Jailani, Zakaria, Zainuddin, & Theis (2022); Albahuoth (2020); Tang, et al. (2020); Aburezeq (2020)
Flipped classroom makes no difference	None
Flipped classroom adversely influences learning	None

Table 3: Findings of Studies

Challenges with Flipped Classroom Method

Upon the analysis and evaluation of the research studies selected in this project, there are challenges that have been studied and the same applies to different findings. There are different challenges that have been determined by the authors. There are approximately four challenges that have been identified by the authors.

Findings of Studies

In a similar manner to challenges, there are different findings that have been acquired and obtained. It has been determined through the comparison of these studies that, flipped classroom technique is quite an effective technique. In fact, it is capable of improving the ability of students to learn and acquire an understanding of the Arabic language.

DISCUSSION

In this research study, 139 articles were obtained and acquired by performing comprehensive research and search. For instance, Google Scholar, Web of Science, Scopus, and ERIC were utilized for the acquisition of research articles. After the analysis and screening of 139 studies, it should be noted that 7 studies were selected and included in the process of review and analysis. Due to duplication, wrong outcomes, and even unsuitable results, it should be noted that 132 studies and articles were excluded. In addition to it, 8 studies were included in the analysis. These studies were comprehensively analyzed and it was identified that the flipped classroom technique is capable of delivering the required outcomes.

First of all, it is important to note that all of the studies included in this research are relatively new. It indicates that the interest of researchers and even educational scholars has increased in the use of the flipped classroom method only in recent times. It even suggests that in the coming years, the method might be considered and implemented in even more studies. It is generally due to the potential of the technique of not only benefitting the learners but also ensuring that the desired learning outcomes are delivered quickly.

In accordance with the literature, the use of the flipped classroom method is specifically associated with a number of benefits. Through the analysis of the selected studies, it has been determined that the technique does indeed offer a number of benefits to learners. The very first advantage as per the analysis is concerned with the improvement in engagement of learners. For instance, when the flipped classroom method is considered and used, it plays a critical role in the establishment or development of an environment in which learners can engage with each other. In fact,

in the classrooms, students are offered an environment in which they can not only perform different activities but also engage with each other.

Through this engagement, students are able to practice their language speaking skills and even language learning better. In this environment, students are enabled to not only converse with each other but also practice the language that they are learning with each other. They can engage with each other and they can even consider role-play. In this manner, it becomes possible for students to make sure that they are able to practice their skills and their language according to the situation to which they are assigned. Another important benefit associated with the technique has been improvement in speaking skills. It has been identified in the analysis that with the use of the flipped classroom method, it becomes possible to improve the speaking skills of learners.

As it has been determined above, this method enables teachers to provide students with an environment in which it is possible for learners to interact with each other. When they are enabled to interact with each other, they are able to practice their speaking skills better. For instance, they are enabled to speak new words, phrases, and whatever they learn and acquire through the videos.

The review has indicated that the use of flipped classrooms in teaching the Arabic language encourages participation. For instance, Alabahuoth (2020) determined that the method is capable of encouraging and even promoting the participation of students and learners in the classroom. When a flipped classroom method is used, it helps in offering different exercises and activities. It is possible for students and learners to participate in these activities and improve their learning to a significant extent. In addition to it, when this method is used, the teacher encourages students to take a part in the exercises and make sure that they achieve the desired results.

When the flipped classroom method is used and implemented, it involves the use of different activities and even exercises in the classroom. It plays a critical role in providing students and learners with hands-on experience. They are able to not only practice writing the language but they are also able to learn new words and grammar. When they frequently engage in such activities, it serves to improve not only the writing and grammatical skills of learners and students, it also encourages students to improve their vocabulary as they learn from the activities and exercises.

It is, however, important to note that some challenges with the use of the flipped classroom method have also been revealed by the review. Ruzman (2020) indicates that a major challenge with the use of the flipped classroom method is the unfamiliarity of both teachers and learners in the context of the Arabic language. Not many instructors and students are aware of the technique and how it works. Similarly,

another major issue associated with the technique is different technological issues as identified by Islieh, Jailani, Zakaria, Zainuddin, & Theis (2022).

For instance, the flipped classroom method involves the use of different technologies. These technologies have different complexities and issues that need to be addressed every now and then. Ruzman (2020) even determines that a challenge is the lack of readiness of instructors to accept the method. Since not many instructors are aware of the technique and how it can benefit the learning of students, they often exhibit and show resistance to the adoption of the method. There is undoubtedly a critical need to address these challenges or else, it would not be possible to implement it in teaching the Arabic language to students and learners.

CONCLUSION

Overall, it can be said that the flipped classroom method is effective in facilitating the learning of students and teaching the Arabic language. This study is one of the few to have been carried out in the context of the Arabic language with a focus on the use of the flipped classroom technique. Through a systematic review, it has been identified that the flipped classroom method has significant potential in benefitting both instructors and learners. However, at the same time, there are some challenges associated with the adoption of this method. Therefore, these challenges must be addressed to further facilitate the use of the flipped classroom method. On the basis of the findings of this study, the following recommendations are offered:

Recommendations for Research

- There is a need to carry out further experimental studies on the impacts of the flipped classroom technique on Arabic language teaching. In addition, qualitative studies must be performed for offering insights into the use of the technique in classrooms.
- Further experimental research needs to be carried out under different class standards.
- In the future, studies should specifically identify the effect of the flipped classroom technique on the vocabulary, reading, listening, and grammar knowledge of students and learners.

Recommendations for Practitioners

- Teachers need to comprehend how the flipped classroom method can be applied and used before they actually consider its application. Information should be gathered about it to facilitate their understanding and ensure that the desired results are achieved without experiencing major difficulties and issues.

- Instructors must focus on the maximization of benefits that are offered by the flipped classroom technique by considering the needs of learners before they engage in the development of their courses.
- There is no doubt that the use of the flipped classroom technique involves the utilization of different technological tools and methods. Thus, it must be ensured that both the students and instructors have access to the desired technologies, and they are also aware of how to use them effectively.

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SHOPEE PAY LATER APPLICATION AND BAY' MUAJJAL: A SYARIAH APPROACH

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Abstract

The evolution of the modern-day world had also given a significant impact on commerce society. People nowadays tend to buy or purchase new things with an easier payment method that can let them have their desired one easily. One of the most famous e-commerce companies at the moment is Shopee. Shopee gave a variety of payment methods towards their customers such as online banking, cash on delivery, Shopeepay, credit or debit card and the newest one is Shopee PayLater. The Shopee PayLater is a payment method service that allows you to consolidate your purchases on Shopee on a monthly basis. It gives an option for you to spread out repayment to 2 months, 3 months, or 6 months with a small processing fee of 1.25% of the total order amount. The main point for this research is to know whether the method of payment using Shopee PayLater is aligned with the perspective of Syariah which is the deferred payment otherwise called Bai Mu'ajal. This research will focus on qualitative method in order to get the correct information and later analyze the ideas and methodological framework of Syariah perspective to draw a general conclusion about the issue as the payment method using Shopee PayLater had some concerns regarding the processing fee and also late payment fee that can lead to Riba al-Qard.

Keywords: *e-commerce, payment, Shopee Paylater, deferred, Bai Mu'ajal, Riba al-Qard.*

INTRODUCTION

Day by day, we often see that the rapid development of technology is mostly influenced by the internet. The use of the internet by society nowadays increasing drastically as everything that is related to human life such as work, study and even buying something had connected with the use of the internet as it is much faster and easier when using this method. This development had emerged a new way of selling or acquiring something that is called e-commerce. (Chai, 2020) stated that E-commerce can be described as the purchasing and selling of something either things or services, as well as the transmission of funds or data, over an electronic network, most notably the internet.

There are a variety of e-commerce companies that gain lots of benefits by selling goods to the customer and one of the most famous in Malaysia nowadays is

Shopee. Shopee is Southeast Asia's and Taiwan's leading e-commerce platform. It is a platform designed specifically for the region, offering customers an effortless, trusted, and quick online shopping experience through strong payment and logistical support. Shopee is an establishment that was based on a Sea company, debuted in Singapore in 2015, and has since expanded to Malaysia, Thailand, Taiwan, Indonesia, Vietnam, and the Philippines. Sea is a regional leader in digital entertainment, e-commerce, and digital financial services. Shopee had introduced lots of payment methods to their customers for example online banking, debit card, cash on delivery, and one of the well-known and newest one is called Shopee PayLater. Shopee PayLater is a feature that allows qualified buyers to buy now and pay later or apply for a 3-month installment loan for their Shopee purchases.

In Islam finance, there was also a method that was similar to Shopee PayLater and that was called Bai Mu'ajal. Bai Mu'ajal is known as deferred price sales which functions similarly to a murabahah contract but with payment generally made on a deferred basis. The contract's stated sale price for the asset includes the profit. Land, buildings, machinery, and equipment are common assets for such contracts. Bai Mu'ajal is one of the most common Islamic financing methods in Malaysia, and it can be considered as a substitute for the finance lease. Customers use it to purchase assets of significant value in installments, from which they can generate future cash flows. In this agreement, the customer receives the asset and is required to make payments in installments over the agreed-upon term. The customer who purchases the asset must pay the profit to the financial institution that arranges the asset.

Razali (2008) tells that scholars have stated that too much ambiguity (gharar) must be avoided in the contract's formulation. As a result of an asset having physical existence and being identified by the customer, the risks of gharar are reduced. Nevertheless, if the sale or purchase agreement is for a house that is yet to be built, it may raise questions about the legality of Bai Mu'ajal because the outcome of such an agreement is uncertain.

In Islam, the law of indebtedness is very flexible depending on one's situation. There is evidence from the Quran that mentions the law of indebtedness and as long as it aims to help people and reduce someone's hardship then it is allowed. It had been stated in the Al-Quran:

{مَنْ ذَا الَّذِي يُقْرِضُ اللَّهَ قَرْضًا حَسَنًا فَيُضِعَّهُ لَهُ أَضْعَافًا كَثِيرَةً وَاللَّهُ يَقْبِضُ وَيَبْصِطُ وَإِلَيْهِ تُرْجَعُونَ}

Meaning: Who will give God a good loan, which He will increase for him many times over? It is God who withholds and God who gives abundantly, and it is to Him that you will return.

(Al-Quran. Al-Baqarah 2:245)

The two methods that were mentioned earlier which are Shopee Paylater and Bai Mu'ajal had a few similarities but there is a slide difference between them according to the Syariah perspective which the Shopee Paylater did not fulfill them

that is the existence of *Riba al-Qard*. This led to doubts among the Muslims in using the method that had been introduced by Shopee as Muslims are prohibited from engaging in any usury-related matter. Therefore, the objective of this study is to break down the status of using the Shopee PayLater as the method of purchasing something from the Shopee apps.

FINDINGS AND DISCUSSION

The Concept of Shopee PayLater

Shopee had introduced a new payment method in their list in line with other payment methods such as debit card, cash on delivery, and online banking during 2021 which is called Shopee PayLater. This feature lets its customer purchase their items which only can be bought through Shopee apps and pay for them later based on a few conditions (Yin, 2021). Based on this method, the customers get to postpone their payment based on their choices of purchase which is to pay for the item fully in one month or convert the payment into monthly installments which up to six months.

The Shopee PayLater payment method works with the appointing of SeaMoney Capital Malaysia Sdn Bhd (SeaMoney) to manage Shopee's installment payment operations. The buyer buys the things that were offered by the seller as usual in Shopee and chose for installment payment. SeaMoney will buy those things and the seller will sell and hand over all amounts outstanding under the purchase agreement to SeaMoney, and the seller will receive the amount outstanding under the purchase agreement. Finally, the buyers will pay in installments to SeaMoney with some charge fee that will be stated after this.

The condition for the Shopee PayLater to be activated by the customers is that it is only valid to Malaysians who are 18 years old of age and above which had a legal MyKad. This mechanism had four options for the customers which are BuyNowPayLater (BNPL), monthly installments that start with two months, three months, and also six months. Here are some of the examples in the table figure that show how Shopee Paylater works towards their customers:

Shopee Paylater Payment Options	Processing Fee	Late Payment Fee
Buy Now Pay Later (BNPL)	0%	1.5% monthly on the overdue amount
2-month installments	1.25% per month on order amount	
3-month installments		
6-month installments		

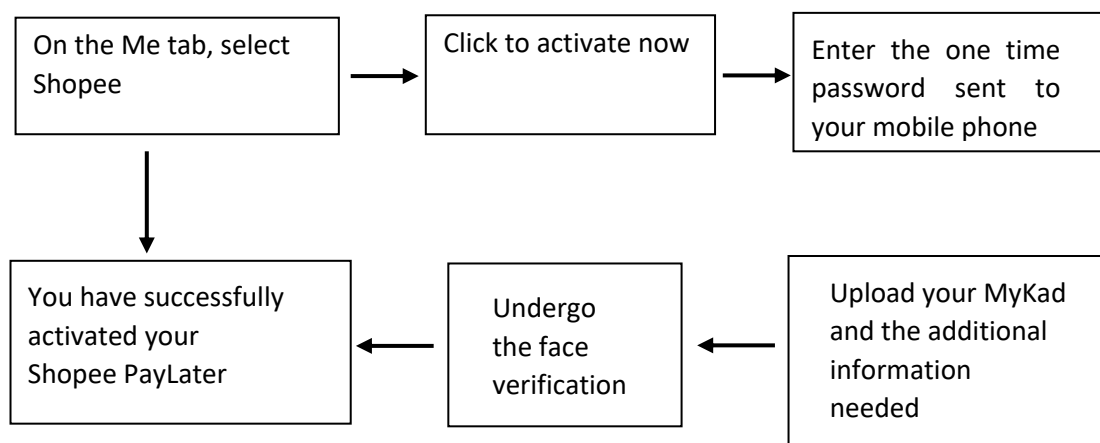
Table 1: Shopee that Shows Paylater Payment Options (Yin, 2021)

Based on Table 1 above we can see that customers who take the Buy Now Pay Later alternatives should pay the exact amount of their purchases in the next month means in the period of one month if they did not want to be charged for their late payment fee. Whilst the customers who chose the option for monthly installments need to pay 1.25% for the processing fee on the behalf of their purchases for each month until they fulfill the exact price of that thing.

These types of customers need to make sure that they must accomplish the payment option that they have chosen based on their own timeframe otherwise they will be charged with a late payment fee which is 1.5% each month after their overdue date and based on the Shopee PayLater condition all payment must be submitted before or on the tenth day for each month.

For example, if you use the (BNPL) option and make purchases between November 1 and 30, you must pay your bill between 1 to 10 December, or otherwise, you will be charged with the late payment fee as stated before. If you chose the 2-month installment plan, you must pay the installments between the 1st and 10th of December and the 1st and 10th of January. SPayLater bills can be paid with the ShopeePay e-wallet, online banking, or cash at 7-Eleven.

It had been stated that Shopee PayLater users will be granted with the amount of spending cap and the maximum limit is RM3000. This maximum amount will be different for each user based on various factors such as repayment history, spending and purchasing pattern on the shopee application. To activate the shopee paylater these are some of the method as shown below



Syariah Issue Regarding Shopee PayLater

The payment using Shopee PayLater might be very easy and useful to the consumer but there are various issues involving Syariah law in an e-commerce business that requires detailed research and study. One of the issues regarding this method is the processing fee. As it had been stated before, a processing fee is an additional charge placed on customers who chose the installment plan offered by Shopee which is up to sixth month. Customers who choose to pay using an installment plan will be charged a processing fee of 1.25% per month of the purchase amount. Meanwhile, there is no additional fee that will apply if the customer pays one-off within a month and there is no issue regarding syariah when using this plan.

Rashid (2021) commented that according to the processing fee that had been stated, we can clearly say that there is an element of usury when using the installment plans as it takes advantage of the profits from the loans granted in spite of that contemporary scholars have discussed the charge of service and these charges are allowed by adhering to the following strict conditions such as the cost is real, and the cost is commensurate with the work that has been submitted also it is not permissible to charge a cost. Next, the cost is direct, and it is paid by the lender for the benefit of the loan, so the borrower should not be charged indirect costs, made by the lender to carry on the amount of his business. Later, the borrowing costs are not related to the amount or term of the loan (in percentage form), but more to the actual cost, without any increase. After that, costs cannot be taken repeatedly unless the service is provided repeatedly. Banks cannot charge periodic fees on the grounds that it is a borrowing cost unless it is a recurring expense or recurring service. Lastly, if it is difficult to place an actual amount of the money that needs to be paid, an estimate may be charged unless the account closes at the end of the year. As a result, if the actual amount is already known, any surplus must be returned to the debtor using the mutually agreed-upon medium (n.a, 2015 تحميل المقرض المصارف الإدارية للقرض جائز 2015، بشروط)

The next syariah issue that arises within the Shopee PayLater is the late payment fee. Late payment fee will be charged to the customers that failed to fulfill the exact amount that they need to pay either using the monthly installments or the (BNPL) buy now pay later options. A shopper will be levied with late payment fee of 1.5% of the amount outstanding on a monthly basis. The late payment fee is understandable seen to have a clear element of usury. This is because any debt that is accompanied by additional payments due to delays in payment is included in the category of *Riba-al Qard*.

Riba-al Qard is one of the *riba* that falls under *riba Ad-Duyun*. It is a type of *riba* that consists of an excess amount, either monetary or non-monetary, over and above the principal (*asl al-qard*) in a loan (*qard*) that a borrower pays to the lender in addition to the principal based on a contractual precondition (*aqad*) or customary practices (*urf*) (n.a, *Riba al-Qard*, 2020). *Riba Al-Qard* also means that money that was paid additionally to lengthen the maturity date of a loan. It is understandable that this type of *riba* is an arrangement of a person making a loan in the form of money to another party with the provision that the party return the loan money with a certain amount or as usual, or obliged a monthly or annual addition on money borrowed.

As we know muslim had been prohibited to be involved in any contract that there is an element of usury in it as it had been stated in the Al-Quran:

{ وَمَا آتَيْتُمْ مِنْ رَبًّا لِيَرْبُوًّا فِي أَمْوَالِ النَّاسِ فَلَا يَرْبُوًّا عِنْدَ اللَّهِ ۖ وَمَا آتَيْتُمْ مِنْ زَكَاةٍ تُرِيدُونَ وَجْهَ اللَّهِ فَأُولَٰئِكَ هُمُ الْمُضْعِفُونَ }

Meaning: Whatever you lend out in usury to gain value through other people's wealth will not increase in God's eyes, but whatever you give in charity, in your desire for God's approval, will earn multiple rewards. (Al-Quran. Ar-Rum 30:39)

The Relationship Between Shopee PayLater and Bai Mu'ajal

The Concept of Bai Mu'ajal

Before knowing the relationship between our main component which is Shopee PayLater and *bai mu'ajal*, first and foremost we must know the concept of *bai mu'ajal*. *Al-bai mu'ajal* is also known as delayed selling price. *Al-bai mu'ajal* transaction involves a process of selling something with immediate delivery of goods and deferring payment until a specific time or period has been set. *Al-bai mu'ajal* is a contract in which the financier agrees to purchase the property desired by the customer. The financier will resell the property he purchased to the customer for the original purchase price plus a profit. However, the customer will pay it in installments over a set period of time and will be paid a certain amount in installments- tolerant, and the financier is usually the bank (Shazali, n.d). Customers can pay in installments, and the amount owed is determined by the total cost of the purchase, as well as the risk of payment.

After that, *Al-bai mu'ajal* is very similar to *murabahah* trading in many ways. However, in today's Islamic banking practice, *murabahah* is more commonly used for short-term (less than a year) or working capital financing, whereas *bai mu'ajal* is frequently used for long-term and medium-term financing, such as housing financing (Yasin, 2003). Profit margin and purchase cost should be detailed and

communicated to the customer for financing *murabahah*, however profit margin and purchase cost do not need to be detailed or disclosed to the customer for bai mua'jal.

Validity of Bai Mu'ajal as a Financing Method

Although Bai Bithaman Ajil (BBA) or also known as Bai Mu'ajal is one of the principles of muamalat allowed in Islam but there is a difference of opinion among Islamic scholars whether it is valid to use as a method of Islamic banking financing or not. Here are some of the legality of Bai Mu'ajal as the basis of conventional financing. First of all, the first view espoused by Muhammad Nejatullah Siddiqi described BBA as a riba transaction (Wahab, 2005). Although BBA is permitted under Islamic law, Siddiqi does not recommend that Islamic banks use it in their financing products. He mentions the following:

“I would prefer that Bai' al-Muajal be removed from the list of permissible methods altogether. Even if we concede to its permissibility in legal form, we have the overriding legal maxim that 'anything leading to something prohibited stands prohibited' (*ma adda ila al-haram fahuwa haram*) ...” (Siddiqi, 1983)

Besides that, In Pakistan, Maulana Muhammad Taqi Usmani, one of the judges in the case of *M. Aslam Khaki v. Syed Muhammad Hashim*, ruled that financing based on additional profits, such as bai al-mu'ajal (BBA) and bai' al-murabahah, was not legitimate to be used as the basis of banking products because it was suspected of containing elements of usury (The text of of the Historic Judgment on Riba, 2001). In his judgment that known as 'Historic Judgment on Riba', he mentions:

“Mark-Up and Interest”

191. Unfortunately, while implementing this technique by the banks and the financial institutions, all the above points were totally ignored. What was done was to change the name of interest and replace it by the name of mark-up. The mark-up system as in vogue today has no concern with any real commodity whatsoever. In most cases there is no commodity at all in real sense; if there is any, it is never purchased by the banks nor sold to the customers after acquiring it.

In some case this technique is applied on the basis of buy-back arrangement which means that the commodity already owned by the customer is sold by him to the bank and is simultaneously purchased by him from the bank at a higher price which is nothing but to make fun of the original concept. In many cases it is done merely on papers without a genuine commodity to be sold and purchased. Moreover, this technique is applied indiscriminately to all the banking transactions having no regard whether or not they involve a commodity. The procedure is being applied to

all types of finances including financing overhead expenses, payment of bills, etc. The net result is that no meaningful change has ever been brought about to the system of interest on the assets side of the banks. Therefore, all the objections against interest are very much applicable to the mark-up system as in vogue in Pakistan and this system cannot be held as immune from being declared as repugnant to the Holy Qur'an and Sunnah. We hold accordingly.

According to Siddiqi and Maulana Muhammad Taqi Usmani, the concept of BBA used in Islamic banking financing products is a path that leads to usury transactions. As a result, Islamic banks are not permitted to use the BBA principle as one of their financing methods. But, in Malaysia, the majority of members of the local Syariah Advisory Council agree with the Shafie school that BBA is a valid method of Islamic banking financing. Although this fatwa was decided by those knowledgeable in Islamic law, it appears to be increasingly being challenged by a small group of civil lawyers. Apparently, there is a group of civil lawyers who attempt to question and challenge the BBA's validity on the grounds that it involves usury transactions. They argue that the BBA's financing is invalid because it contains elements that are contrary to Islam and the Islamic Banking Act of 1983.

In order to develop and mature Islamic banking law in the country, the author argues that it is not wrong for civil lawyers to raise sharia law issues in civil courts. However, in-depth knowledge of Islamic law is required. Because Islamic banking is subject to civil court jurisdiction, Islamic banking litigation cases will be more complicated if the issue of Syariah compliance is argued by someone who is less knowledgeable about Islamic law (Hasshan, 2008). Elements of deep knowledge of Islamic finance may be considered a burden because, as we all know, not all civil court judges and lawyers have a Syariah education background, particularly in the field of muamalat.

However, an in-depth understanding of the principles of Islamic banking that underpin Syariah principles is critical to deepening because Syariah principles are very broad, necessitating a more precise understanding of its implementation and application. In the absence of even a basic understanding, there will be confusion, and the distinction between Islamic banking financing facilities and conventional loan facilities will be obscured.

Shopee PayLater and Bai Mu'ajal

To understand the distinction between a BBA transaction and a Shopee PayLater transaction, we must analyse the relationship between these two. But first let us look at the similarity between Shopee PayLater and bai mu'ajal. These two transactions give the customer the choice to postpone payment until a specific time or period has

been established but gain the item that was purchased immediately. Next, the financier will resell the purchased property to the customer for the original purchase price plus a profit and in the case of Shopee PayLater it is the SeaMoney Capital Malaysia Sdn Bhd (SeaMoney) will purchase those items, and the seller will sell and hand over to SeaMoney all amounts owed under the purchase agreement, and the seller will receive the amount owed under the purchase agreement. Same with the concept of bai mu'ajal the customer, on the other hand, will pay it in installments over a set period of time and will be paid a certain amount in installments-tolerant and the same thing occur with the transaction using Shopee PayLater which the buyers will pay in installments to SeaMoney for the bank is in charge of Shopee's installment payment processes.

Next, the difference that happens between the contract of using Shopee Paylater and bai mu'ajal is that the customers that use the Shopee PayLater payment method will pay in installments to SeaMoney with some charge fee which is 1.25 percent for the processing fee on their behalf for each month's purchases until they meet the exact price of that thing. Besides that, these customers must ensure that they complete the payment option that they selected based on their own timeframe, or they will be charged with another fee that is a late payment fee of 1.5 percent per month after their overdue date, and the customer needs to make sure that all payments must be submitted before or on the tenth day of each month, according to the Shopee PayLater condition. We can clearly say that there is an element of usury when using the installment plans and also when the customers fail to pay according to the time period they have chosen because it takes advantage of the profits from the loans granted based on the processing fee that was stated. The late payment fee is evident that it contains a clear element of usury. This is because any budget deficit that is accompanied by extra payments as a result of payment delays falls under the category of Riba. We can see that, in exchange for the loan, the customer, as the debtor, must repay the principal amount borrowed plus interest. The bank views this interest as a source of profit and income. However, according to Islamic law, the interest charged by this bank is a form of usury rather than profit (Hasshan, 2008). The interest earned by the bank on this loan transaction is known as *riba qardh*, and its law is haram in Islam. In a hadith it had been stated:

From Ali r.a., he said: Rasulullah s.a.w said: *“Every debt which is deliberately to seek benefits, then it is usury”*.

(Reported by Al-Haris Bin Abi Usamah)

Meanwhile, in a BBA transaction, the contractual relationship established between the bank and the customer is seller-buyer. Buying and selling (al-bai) are one of the permitted transactions in the Islamic muamalat system. In Islam, a loan

contract is only valid under the concept of *al-qardh al-hasan* (benevolent loan). The creditor (*muqridh*) cannot demand payment in excess of the amount lent under this concept. The debtor (*muqtaridh*) is only required to pay back the amount borrowed. Debt is permitted in Islam as a means of assisting human beings in distress. As a result, creditors are prohibited from profiting from the plight of others. Giving a debt is a circumcision practice that is rewarded with a large reward, whereas accepting a debt should be legally permissible (Thalib, 1997).

Since the concept of *al-qardh al-hasan* is based on the value of human kindness, it is less suitable to be used as the basis of banking products. Banks will be unable to generate profits if Islamic banks use the concept of benevolent loans for deposit and financing facilities. As a result, the majority of Islamic banking products are introduced via contractual relationships such as vendor-purchaser, entrepreneur-investor, lessor-lessee, and so on.

Nowadays with business as well as buying and selling are halal transactions in Islam, the majority of Islamic banking activities today are business-oriented and buying and selling. Among the purchasing and selling concepts used in modern Islamic banking products are *bai 'bithaman ajil (BBA)*, *bai 'murabahah*, *bai 'salam*, *bai 'istisna*, and *bai 'al-inah*. In consumer financing facilities, Islamic banks typically use the BBA concept, in which these banks buy the property desired by their customers and then resell the property to their customers at a profit.

Here the author would like to emphasize that the profit earned by the bank in BBA financing is halal because it is based on an asset sale and purchase contract. The profit cannot be compared to the interest charged when using Shopee PayLater. Interest on a Shopee PayLater transaction is illegal because it is a financial remuneration received without the sale of any assets.

Implication of Using Shopee PayLater

The emergence of Shopee PayLater may provide comfort and convenience to the buyer however it also had numerous implications to the buyer when using this kind of method. First and foremost, there are additional fees and interest. Shopee PayLater does not help you to buy your desire things easily however, it asks you to purchase items and charge interest as well as additional costs. Even if we actually have enough money, because there is a lure, we end up choosing to buy first and paylater. If this habit continues the buyers will frequently purchase unnecessary items. Business owners will come up with a strategy for spending on non- marketable products. As a result, this payment method or service will be vigorously and frequently promoted. The only advantage of paylater is that it has a long repayment duration.

Second, this payment method will make your consumption soar increasingly. When customers successfully use the paylater feature, their demand to buy things rises. Furthermore, the customers did not need to make a bank transfer because the amount is automatically deducted from the given limit. If they use the paylater feature frequently, the maximum spending limit will most likely increase. With each increase in the limit, the consumer soon finds it more difficult to restrain itself. Finally, the habit of purchasing a large number of items is unavoidable.

After that, (Iin Emy Prastiwi, 2021) stated another bad consequence when using Shopee PayLater is burden the monthly finance and financial management. Shopee PayLater might become a good choice when you have a lot of money and did not use credit card however if our income remains constant while our monthly expenses increase due to installments, we will face financial difficulties. If we continue to spend, these costs will rise and eventually put a strain on the budget. One of the causes of cluttered financial records is frequent shopping, which includes a list of financial statements that have been planned in advance. Later, when customers made a late payment fee they will be charged by the Shopee with additional interest. The fines that must be paid differ considerably and are determined by the option that had been chosen by the buyer itself. Ideally, we should first read and comprehend this paylater feature before deciding to use it. Particularly concerning the interest charged on each of your monthly bills, as well as the fines imposed for each of your late payments. Not to mention any additional costs or administration that may be incurred.

Furthermore, the use of paylater repeatedly for the purpose of paying can cause unforeseen costs. People, particularly millennials, are very fond of speed and practicality. When they use the paylater feature, they were often unaware of the various costs that are immediately active. For example, subscription fees, installment fees, and other fees that vary in amount depending on the option that they have chosen. When the bills start to arrive, this cost is sometimes regretted. These additional fees will burden other important payments such as property and vehicles which are at risk of being fined.

Besides that, the obsessive use of Shopee PayLater for some customers might eventually lead to the use of more than one Shopee PayLater account. Once the desire had been fulfilled, the likelihood of satisfying another desire will increase. Although this is not the case for everyone, some people are tempted to use another paylater to buy their desired things, especially if one platform's limit has been reached. When there are a lot of paylater accounts that are used to purchase something, the bill will be large and increase each month.

Most importantly, Identity Hacking Transacting via digital does not escape the potential dangers of hacking. Despite the fact that each application provides a high level of security for its users, the risk of cybercriminals finding a way to hack

the database in the account and use it for irresponsible purposes remains there. Although with today's sophisticated digital technology, the security of users' personal data across multiple registered sites or applications could be compromised by cybercriminals. Such private documents will be used for irresponsible and extremely harmful purposes, such as burglary and fraud. In recent years, there have been countless deceitful criminal acts, such as the activation of a paylater account by an unknown person.

Finally, it is understandable that paylater sometimes can be useful in an emergency situation. However, there are times when this even plunges. Especially if you use multiple platforms and find it difficult to pay for them all. Little by little, the financial burden grows larger and larger over time. It is preferable to save rather than use this feature and end up ruining your finances. By saving, a variety of necessities can be purchased in cash, free of interest and other costs.

Islamic Legal Views on the Use of the Shopee PayLater Application

Before the author decided to discuss about the views of Islamic law on the issue of Shopee PayLater, first we should know in advance about the conditions and pillars that occur when using the Shopee PayLater application.

- 1) The presence of sellers and buyers or contract holders (*al-muta 'aqidain*)
 - a) Although there are clearly sellers and buyers in the Shopee application, the two do not interact directly. By visiting the seller's page, buyers can only see the goods or products sold.
 - b) Not by coercion, buyers are free to choose goods or products to be purchased.
- 2) There is an agreement (Ijab and Kabul)

When purchasing an item, the confirmation page is included in the agreement because both the seller and the buyer agree after they have made discussion between them.

- 3) Ma'qud 'alaih (Goods for sale)

Shopee offers a wide range of items with pictures or photos already attached by the seller indicating that the item is genuine, however, if the item is empty or has run out, there is a menu that indicates that the item is empty and thus cannot be selected. Delivery of purchased goods takes time to reach the recipient or buyers, and encouraging the buyer to comment on the goods has been accepted as proof that the goods have arrived at their purpose.

Nothing in the pillars and legal conditions of sale and purchase that have been described above in relation to the Shopee PayLater feature contradicts or violates the legal conditions of sale and purchase. Besides that, Shopee PayLater is included in the Qardh contract, according to Islamic law. *Qardh* contract is a loan agreement between the person who made the loan and the borrower that requires the borrower to return the money he received to the lender at any time within the agreed-upon time frame (n.a, DEWAN SYARIAH NASIONAL – MAJELIS ULAMA INDONESIA, 2020). If the user agrees to the conditions, then both the user and the Shopee agree, indicating that the pillars and conditions of the *qard* contract have been met. The pillars of *qard* are that there are two parties who make an agreement (lender and receiver loan), as well as the existence of a property on loan and *sighah* (Ijab Kabul)

Nevertheless, the terms of the *qard* contract are not applied in the practice of Shopee Paylater because there are several things in its implementation that are not in accordance with or even contradict Islamic law which is the processing fee and also late payment fee as it had been mention above in point 2.2. If the user misses the due date on Shopee PayLater payments, there will be a penalty of 1.5% late payment fee, but if the user pays on the due date, there is no interest. Shopee created the Shopee Paylater feature on purpose in order to profit from the loans of its users. So it can be said that the loan that was given to the customers was created and provided by Shopee for Shopee, implying that it is all a marketing strategy designed to attract users and make Shopee appear better than other e-commerce sites.

According to Syeikh al-Islam Ibn Taymiyyah, Ibn al-Qayyim, Syeikh Muhammad al-Utsaimin, and Syeikh Salih al-Fauzan, it is permissible to impose the due date on the debt (*qardh*) (Abdullah, 2017). However, if the debt has a condition that requires addition or a fine after maturity, then it is an act of usury and is included in the *riba nasi ah*. Besides that, Ibn Qudamah also said, "Every loan (*qardh*) that requires an addition to it, then the addition is *riba* without distinction among the scholars" (Qudamah, 620 Hijrah). *Riba nasi ah* is a monetary addition made to compensate for the lengthening of the payment period. For example, if a debtor has reached the maturity date but has been unable to pay it. As a result, he will be subject to a fine or a nominal surcharge as compensation for the delay. Any transaction that includes usury is illegal, and anyone who commits it renders the transaction void and invalid. Transactions of a usurious nature are prohibited based on Ayat Al-Quran:

وَأَحَلَّ اللَّهُ الْبَيْعَ وَحَرَّمَ الرِّبَا

Meaning: but God has allowed trade and forbidden usury

(Al-Quran. Al-Baqarah 2:275)

Later, fatwa from the mufti of the federal territory stated that “after analyzing Shopee's installment payment system, Shopee PayLater, we discovered that there are some Shariah issues that arise. Syariah's issues concern processing fees and late payment penalties, both of which contain an element of usury. There is no shariah issue with the one-time payment method within a month because there is no element of usury and it can be used. However, *al-Qard* usury applies if the customer pays late and incurs additional charges. It is emphasized that Muslims are not permitted to engage in any transaction that contains an element of *riba* because *riba* is haram and a major sin” (Rasid, 2021).

CONCLUSION

To conclude this research, the author would like to assert that any transaction that include any element of usury is forbidden for those who practice Islamic law. Based on this research, the author can say that Shopee PayLater is an online electronic money lender that can only be used to purchase non-digital products on the Shopee app. Once approved by Shopee, users will automatically receive a loan balance limit which can only be used to shop for multiple products in the Shopee application except for any digital products in the deals, top-ups, and bills category. Paylater is a payment method feature that uses bailout funds from the company and in the case of Shopee it is the SeaMoney Capital and profits from the user through the bill that must be paid, the bill that included interest and fines specifically mentioned in the Shopee terms and conditions. Paylater is not allowed under Islamic law because it is a loan that is included in *riba nasi'ah* as it had two main syariah issue in it which is the processing fee and also late payment fee.

The author would like to make some recommendations to either the buyer or the lender, namely the Shopee company, for example, Shopee should eliminate interest in PayLater payment transactions so that Shopee PayLater users can avoid any usury that can occur during the purchasing of something in the Shopee application and this is particularly for Muslims. Besides that, The Shopee must construct terms and conditions for prospective Shopee PayLater users, such as attaching a clear salary slip, to ensure that the customer has enough income to pay the paylater bill. This is done to reduce the possibility of late payment. In addition, the author would also like to recommend that Shopee company hire Syariah advisor to advise the company, especially in this matter is the banking operations in order to ensure that they do not contain any prohibited elements under Syariah principles.

Finally, the author hopes that this research can help all Muslims out there in order to clear up consumer confusion about the use of Shopee PayLater transactions. The author also hopes that there will be more research that is far more detail and in-depth study regarding this topic which had become one of the latest and hotly debated issues especially among the Muslim community. May Allah bless us and keep us away from any that He forbid.

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AN ANALYSIS OF VISUAL PRIVACY FROM ISLAMIC PERSPECTIVE OF MODERN TERRACE HOUSING DESIGN IN MALAYSIA

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Abstract

Reviews of past literature indicate lack of visual privacy in the design of terrace housing in Malaysia, especially for urban Malay occupants with regulations and principles governing the privacy and modesty of self, family and house. However, previous studies did not specifically elaborate about the characteristics of visual privacy from Islamic perspective found lacking in the designs. The aim of this study is to examine how the current terrace housing design affects behavioural and daily life of urban Malay family, with regards to visual privacy and visual access satisfaction. The study, utilizes method in-depth interview and space syntax analyses. Findings indicates specific design aspect which effects the visual privacy satisfaction of Malay family. In addition, data highlight discrepancy of urf' (customs) and design, resulting in lack of use of certain spaces and elements provided in the design.

Keywords: terrace housing, urban Malay family, visual privacy, space syntax

INTRODUCTION

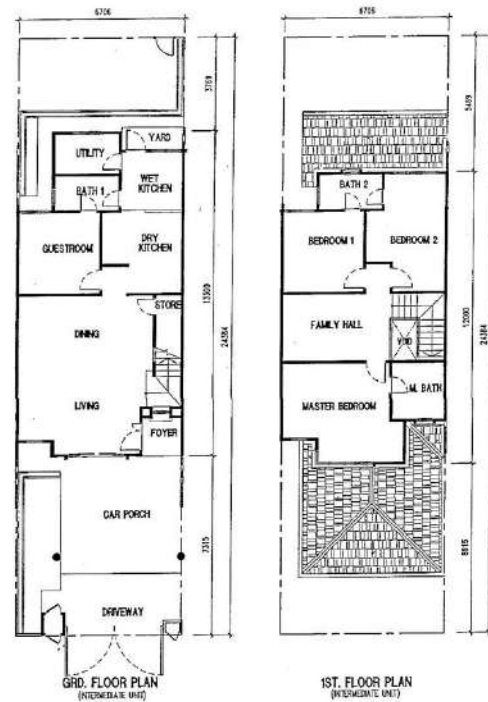
Privacy is seen as one of the most important consideration in the Muslim houses (Besim, 1986; Spahic, 2010). The primary function of the house; as in the revelation of the holy Qur'an (Al-Nahl, 80), "*It is Allah who made your homes of rest and quiet for you...*" is to provide a sanctuary and haven for the true believers, and is Allah's will as a physical and mental refuge from the outside world. The revelation emphasises the importance of the house as a primary setting for privacy. A house is more than just a structural shelter, instead it is an institution of great significance to cultural and family development (Rapoport, 1969; Spahic, 2010). The importance of visual privacy is highlighted in the Qur'an, the Muslim holy book and the sayings of the Prophet Muhammad (P.B.U.H.). Islam considers all types of privacy in its jurisprudence, however visual privacy takes precedence when it comes to build environment (Besim, 1986). Besim (1986), Asiah (2008), Hisham (2003), Spahic (2010) and Zulkeplee, Buys, & Aird (2014) emphasize the importance of visual privacy in the design of Muslim housing. Given its importance, prioritisation for visual privacy in the house design according to Islamic principle and culture is important to provide the optimum level of visual privacy for the family. In the context of the Muslims, visual privacy is influenced by both cultural and religious requirements (Besim, 1986; Hisham, 2003; Zaiton, 2015).

Privacy as a whole is one of the most important characteristics of a Muslim's house and plays a dominant role in establishing the form, layout and functioning of the house (Asiah, 2008; Besim, 1986; Hisham, 2003; Spahic, 2010; Zulkeplee et al., 2014). The lack of consideration for visual privacy and other housing needs in the design will result in the inability to achieve the level of visual privacy needed and cause behavioural adaptation which may have negative consequences on the life of the occupants. The need for visual privacy also resulted in the hierarchy of spaces and design of entrances and openings such as seen in the traditional Muslim houses (Abdel-moniem, 2010; Spahic, 2011).

RESEARCH BACKGROUND

According to Zulkeplee et al. (2014) and Abdel-moniem (2010) although Muslim houses may come in a variety of forms and designs based on local cultural influences, there should be similar architectural design language unifying them in order to fulfil the same religious needs. This is the role of *urf'* or local customs which are to unify and diversify Muslim housings (Besim, 1994). The design of urban housing today should be instilled with the same sensitivity to religious and cultural needs as the traditional Malay house, thus reflecting the continuity of *urf'* which is an integral aspect of a component of an Islamic built environment. The terrace housing today is a step backwards, as it totally disregards the socio-cultural factors indicated by the needs of Islam as a religion, and Malay as a culture.

Terrace housing is one of the most popular housing type (Nangkula & Nurhananie, 2011; Noor Hanita, 2009; Salehaton et al., 2012) and one of the densest housing typologies in Malaysia, hence fulfilling its main purpose of accommodating the masses (Nangkula & Nurhananie, 2011). The terrace house, also known as 'row house' or 'link house,' is identified by its long narrow form and arranged in rows along a grid pattern divided by streets and narrow back lanes. Figure 1 shows an example of an early terrace housing area in Malaysia, while Figure 2 shows an example of a typical plan layout of a terrace house. According to Mohamad Tajuddin (2009), the main factor affecting the terrace housing layout is the maximum utilisation of land-based on setback requirements and distances between buildings to accommodate wind flow, firebreaks, and sanitations.



(a)

(b)

FIGURE 1. (a) Example of terrace housing development in Malaysia (Source: <https://www.iproperty.com.my/>), (b) Typical layout of a terrace house in Selangor, Malaysia (Source: Valuation and Property Department, MPKj, 2017)

Furthermore, Ryung Ju & Saari (2011) stated that each row of terrace houses is only allowed to be built up to a height of 96 metres due to fire regulations. Terrace housing on the current market has a width ranging between 4.27 metres (14 ft) to 6.7 metres (22 ft), and length between 55 ft to 75 ft. However, the length for recent designs is more likely between 16.76 m (65 ft), 21.34 m (70 ft), or 22.9 m (75 ft). Besides, this housing type varies in terms of its levels (single storey to two or three-storey units), price, design, and build-up area. The design typically comprised of a porch area, living area, dining area, kitchen, and a bathroom on the ground floor, and in some cases, a small room for the maid, a master bedroom with an attached bathroom, a family space, two bedrooms, and a toilet located on the upper floor. Figure 3 shows a typical layout of a terrace house, with perimeter boundaries clearly defined using a chain-linked fence, low brick walls, or the main gate of the house.

Past studies highlighted the serious issue of lack of visual privacy endured by Malay occupants of terrace housing (Asiaah, 2008; Zaiton & Ahmad Hariza, 2008; Farah, 2010; Tajuddin, 2003). The level of visual privacy is normally measured against the compliancy to *Shariah*, thus it appears that the terrace housing design and overall development planning is being insensitive to the Malay Muslim families' religious requirements. Erdayu, Esmawee and Masran (2010, 2012) pointed out that conflicts

arising between the home environment and cultural norms may adversely affect the occupants psychologically, inducing "housing stress". The occurrence of housing stress will ultimately lead to changes of behavioural norms and abandonment of required religious and cultural values (Ahmad Hariza and Zaiton, 2008; Farah; 2010). Observation indicated a lack of visual privacy for Malay Muslim families living in terrace housing. The incongruence between religious and cultural needs and house design pertaining to visual privacy may lead to negative changes in lifestyle and discomfort, such as neglect of religious requirements and sacrificing freedom of visual access and openness. To turn one's back against basic spatial requirement of the users of the space, may ultimately impact their comfort level and quality of life within the space, hence, the spaces will not be used optimally.

Objective: To investigate the ability of terrace housing design in fulfilling visual privacy needs from Islamic perspective for Malay Muslim families.

Question: To what extent is the terrace housing design able to fulfil visual privacy needs from Islamic perspective of Malay Muslim families.

METHODOLOGY

Based on a study by Amini and Adibzadeh (2020), visual preferences are an important aspect in the research of built environment and people's preferred views or scenes. The study sought for a more exploratory approach, via in-depth interview method, due to the more explorative nature of the study. The in-depth interview method allows a better understanding of the relationship between human preference and the characteristics of privacy related to the visual sight. Furthermore, Ahmad Hariza & Zaiton (2008) insist the appropriateness of the in-depth interview method in a study such as this as it encourages a more fluid interaction between people and allows a more detail analysis on aspects of privacy of the house and its effects on the occupants and family members. Therefore, in this study, 10 respondents living in two-storey terrace housing in two locations in Selangor were interviewed. Their selection was based on the willingness to participate in the study. Each interview lasted between 50 to 60 minutes and is unstructured but based on a list of prepared questions. Respondents were coded A1 to A5 to indicate samples from more earlier terrace housing area and B1 to B5 for respondents from more recent terrace housing area (more modern design).

In addition, space syntax analysis was also carried out on the ground floor plans of the 10 respondents' house. The output of the space syntax analysis is in the form of isovist diagram which shaded area indicates visual penetration into the area of the house from a selected point of view.

RESULTS AND DISCUSSION

The results from in-depth interview clearly shows that 6 out of 10 participants were not satisfied with visual privacy provided by the terrace housing design (participants A1, A2, A4, B2, B4, B5). There were a few common issues raised by participants. Firstly, the position and orientation of the main entrance door that may be problematic when it opens directly towards the kitchen area (participant A2) or bedroom door on the ground floor (participant B2). The direct line of sight from outside (public) to the more private space inside such as kitchen and bedroom when doors are opened resulted in the feeling of insecurity and discomfort for the participants. Secondly, participants A1 & B2 both indicated they were not happy with provision of sliding door at living area. Both participants have removed the sliding door during modifications. Participant A3 have replaced standard windows with sliding doors during her house modification, and was unhappy with that decision as it needs to be kept closed all the time.

Open planning concept is also an issue with a few respondents from the more recently built terrace housings (participants B2 & B5). They informed that the open-plan concept, although providing the feeling of spaciousness, can sometimes be inappropriate in terms of protection of *awrat* because visitors are able to see all the way to the kitchen when they enter the house. The lack of internal barrier or partition within the space was found to be an issue. Participants B2, B4 and B5 also indicated that the existing gate design provided by the developer was too open, allowing visual intrusion to occur too easily into the porch area and interior of the house. A number of the participants also highlighted that even if they did not like the existing design of the house, they had no choice but to choose the house as it was the only one that they can afford at the time (participants A4, A5 & B1). This finding from the in-depth interview analysis is in line with studies by Asiah (2008), Farah (2010), Mohamad Tajuddin (2009) and Zaiton's (2007), highlighting issues with existing terrace housing design which lacks sensitivity to the Malay family's privacy needs and religious requirements.

"I am satisfied with the ability of the design to block views from the outside. However, in terms of the interior design, I was not satisfied with the privacy levels in the house. As you can see, the existing front door opened directly straight to the kitchen. This here (indicating the room of the interview) was previously the kitchen. I was unhappy with that." (Participant A2)

"Yes, I do like the open planning concept. It is easier to manage and furnish. However, regarding protection of *awrat*, people can easily see you due to the open concept and it can be quite inappropriate at times. It is because there is no divider or partitions." (Participant B5)

The findings from isovist diagrams highlighted that for majority of the cases for in-depth interviews (70%), private areas for female family members and circulation paths for them to move in the house (kitchen, staircase and door to bedroom) are within the isovist (grey shaded) area. Figure 2 shows an example of isovist diagram from the house of respondent A3. This suggests that when non-mahram visitors are in the living room, female family members are constrained in terms of movement in the house. This was confirmed by the responses from the in-depth interview which highlights their dissatisfaction of the design elements and position of main door, entrance to staircase and bedroom door position. Furthermore, respondents also complained of lack of internal partition within the house in the case of house with open-planned concept.

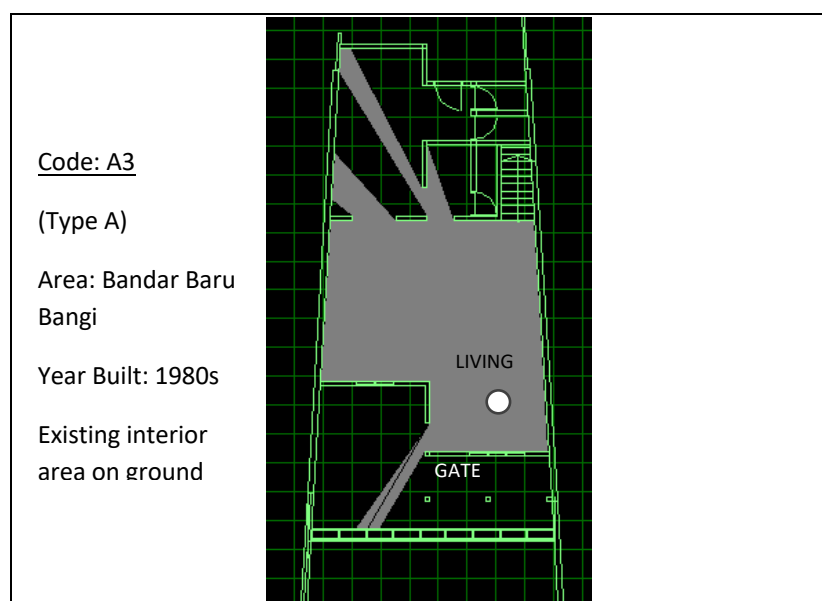


FIGURE 2. Isovist field on ground floor plan of Case A3

The study concludes that in terms of providing adequate MVP level for Malay families; 1) the position of the main door, 2) the design of the entrance area, and 3) the design and materiality of the side boundary wall and main gate are very important to not only maintain visual privacy of the family, but also visual privacy of neighbouring houses. The space syntax analysis highlights the importance of the design of external elements and outdoor areas of the house to maintain MVP of Malay families in terrace housing. Due to the proximity of the houses, there appears to be a need to design external areas in terrace housing scheme with equal care and attention as a designer would design interior spaces of the house. Proper design of the physical elements protects Malay families from visual exposure as per Islamic requirement, and still allows visual access for security needs.

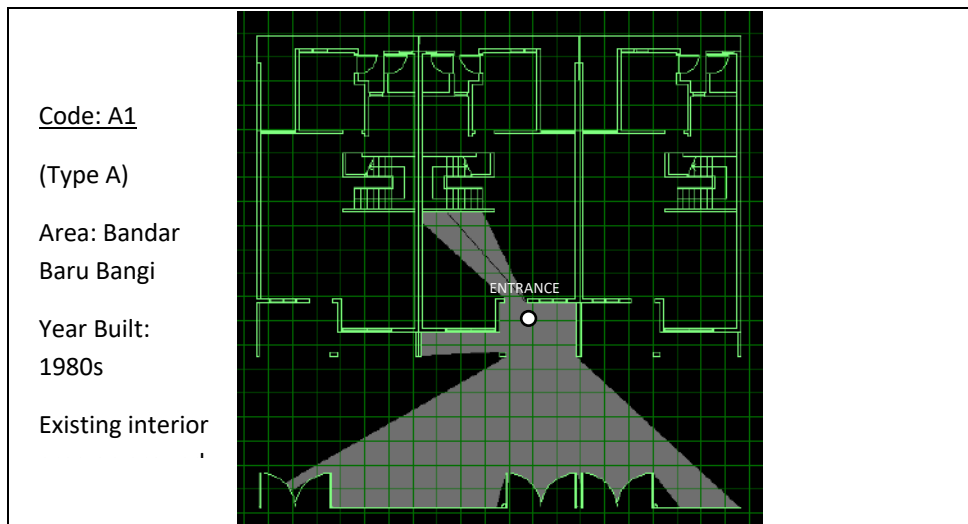


FIGURE 3. Isovist field on external area of Case A1

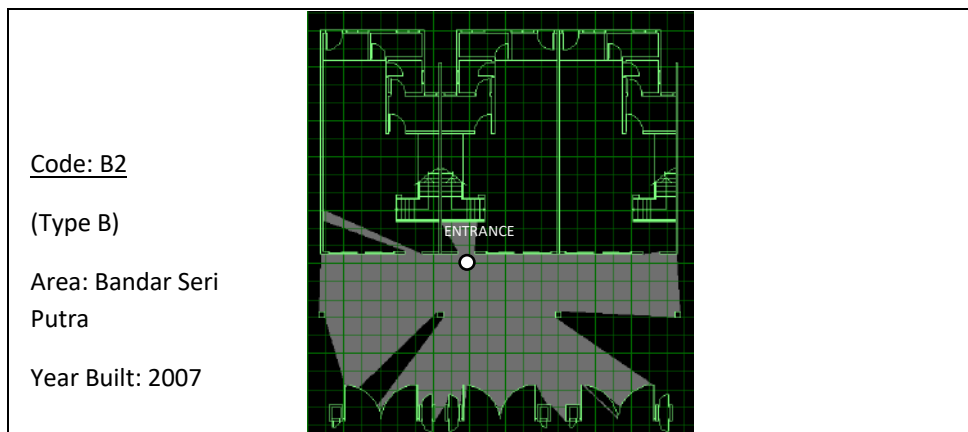


FIGURE 4. Isovist field on external area of Case B2 shows visual penetration into neighbouring houses area due to low side boundary wall at porch area.

The findings also show the importance of the overall planning and design elements of the terrace house towards providing the required optimum visual privacy for Malay families living in terrace housing. Samples of more recent terrace housing design, completed in 2015, shows that the mirror-concept planning contributed immensely to visual intrusion into the houses due to position of doors and windows facing each door on front and back. Responses from in-depth interviews from the two house-owners of the cases informed that tinted windows were imperative in achieving visual privacy level required. They also found opening the main door is discomforting due to the present design where the door is directly facing the gate.

The issue became more critical as most openings are located to 'veiled' spaces most habituated by women which are the master bedroom and bedrooms on first floor, and kitchen and living area on ground floor. While the frontage is afforded extra ration of visual privacy due to the setback from the street, the visual privacy from Islamic perspective for the back of house areas however is highly compromised due to close proximity and narrowness of the back lane and the house being on same street level.

This allowed direct view from one house into another, as well as strangers into the kitchen area.

CONCLUSION

In summary, the findings of this study highlights important aspects of the design element of current terrace house in Malaysia which are impacting the visual privacy level of Malay families; 1) the position of the main door and visual corridor created from one house to the other, 2) the mirror planning of terrace houses, 3) the close proximity between main entrances, 4) the height, material and design of the gate and side boundary wall, as well as, 5) outdoor elements such as road, trees and hedges, have profound effect on the overall visual privacy level of the terrace house and impacted on occupants' satisfaction. The characteristics of physical elements from traditional Islamic housing for example requirements of window heights (i.e. window sill clears eye level) as outlined by Besim (1986) may not be applicable in terrace housing context as the internalised courtyard design is a rarity to terrace housing development in Malaysia, and adequate window openings are important for lighting and ventilation of the long internal space. In conclusion, the study found that it is imperative for designers to be more sensitive to religious needs in terms of protection of visual privacy especially in areas at the perimeter of boundary of the house; porch, entry areas and kitchen. In providing appropriate visual privacy in line with Islamic requirement, occupants will enjoy higher degree of freedom in their house and may use all spaces optimally.

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THE DESIGN OF ARABIC LINGUISTIC CONTENT (ALC) FOR UGANDAN ADULT BEGINNERS (UAB)

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Abstract

This paper aims at analyzing the mechanisms of designing Arabic linguistic content (ALC) for Ugandan adult beginners (UAB). The paper is descriptive and analytical in nature. It describes the conventional design of ALC proceeded by the detailed functional analyses for UAB. The focus is centered on two major ALC design components: ALC linguistic design and ALC technical design. On one hand, the paper analyses the two major aims of ALC linguistic design including the deliberate selection of lexical content, grammatical and morphological rules. On another hand, the paper analyses the three Major Aims of ALC technical design including: deciding on ALC format, developing ALC instructional strategy and developing ALC evaluation strategies. The analysis of ALC development format involves the guide to expand ALC synonyms and antonyms using Arabic derivative morphology ADM. The format design also involves planning the best modes of how to impart the ALC knowledge to UAB audience. Whereas the analysis of ALC instructional strategy development touched ALC theoretical models, ALC instructional framework, and ALC instructional activities. Finally, the paper analyses the ALC evaluation strategies which includes designing ALC learning outcomes, teaching and learning experiences as well as ALC assessment strategies. Such a carefully constructed ALC design is recommendable for the related ALC curriculum and instructional design, research and experiments in favor of UAB.

Keywords: Arabic Linguistic Content, linguistic design, technical design, Arabic Derivative morphology, Lexical Content

INTRODUCTION

The design of ALC requires the resource persons to begin with the assessment and work their way backward. This is done because it creates better objective alignment as well as assuring ALC learning experiences are in agreement with what they ought to test. Thus, it is also advisable to use backward design, learning outcomes so that the resource persons create a foundation for designing all about ALC course. Hence,

resource person identifies learning goals and objectives and learning outcomes. By identifying learning outcomes, they can then work backwards to develop approaches to instruction and course progression that achieves the stated learning outcomes.

During ALC design the resource person designs the major instructional, lexical, grammatical as well as morphological content. Since the resource persons gather all necessary information during the analysis stage including ALC's target audience, the goals and aim to achieve. The resource persons also determine the best way to deliver the information. At this level resource person designs the laying out of ALC structure as it is necessary to be done during pre-experimental stage. The major concern of ALC design activities is to create ALC standard structure. The layout of ALC included the descriptions of main topics that covers ALC goals as well as short descriptions of the contents and a general idea about ALC output will look like. At the end of design stage the resource person creates a scientific document that guide the ALC instructional developments.

The design of ALC for UAB is centered on two major components: Designing ALC Content and ALC Technical Design. ALC design is meant to accomplish three main goals including designing the: grammatical, morphological as well as lexical content. Whereas the Major Aims of ALC technical design is meant to achieve three main goals; deciding on ALC format, developing ALC instructional strategy and developing ALC evaluation strategies. ALC format includes the guide to expand common Arabic verbs using Arabic derivative morphology synonyms and antonyms. It also analyses the best modes of how to best impart the knowledge to the target audience. They designed both Face to Face as well as keeping in view of an online teaching methods bearing in minds the necessity of preparing a manual that the students will be able to study at their own pace. Creating an electronic ALC on a computer and considering a blended ALC learning is another technical consideration. Whereas ALC instructional strategy touches (i) ALC theoretical model, (ii)- ALC instructional framework, and (iii)- ALC instructional activities and (iv) ALC evaluation strategies which include designing ALC learning outcomes, teaching and learning as well as ALC assessment strategies:

(ALC) LINGUISTIC DESIGN FOR (UAB)

The major aims of ALC linguistic design is to accomplish two main goals including the deliberate selection of 1. lexical content selections and designing lexis wordlists for UAB, 2. designing ALC grammatical and morphological rules for UAB.

1. Designing Lexis Wordlists for UAB

The Luganda – English –Arabic Dictionaries are good examples of the lexis texts recommended for UAB because they are meant to enhance Arabic communication at

different levels using Luganda-English moderation. The development of Luganda – English –Arabic Dictionaries systematically applied Arabic derivative morphology is conducted at three lexical levels: (i) by using Arabic words that exist in Luganda language with Arabic origin and never changed. (ii) by using Arabic words that exist in Luganda with Arabic origin but changed; and (iii) by using typical Luganda words. Thus, ALC can be easily expandable for UAB using ADM and the Luganda – English –Arabic Dictionaries (Kirembwe et al., 2012; 2014; 2015; Snoxall, 1967).

The above wordlists are recommendable as primary resource of ALC lexis for UAB because they were designed to serve the following objectives:

- i) They improve the mastery of Arabic language so that Ugandans can always understand Al'Quraan and Al' Ssunnah references.
- ii) They enhance the awareness, Islam and Arabic culture.
- iii) They enhance the readiness to acquire various linguistic skills for both Local and Arabic language.
- iv) They serve as a Luganda Arabic word reference at all levels.
- v) They encourage cultural combination among Islam, Luganda and Arabic culture.
- vi) They address people interests in Arabic African communication.
- vii) They introduce an up-to-date wordlist for Luganda vocabularies borrowed from Arabic language.
- viii) They encourage African (Ganda) linguistic innovations for different practical and theoretical purposes so that foreign linguistic activities can reach modern applications for all life aspects.
- ix) This dictionary provides learners with opportunities to:
 - a. Implement techniques of learning Arabic language by using Luganda words borrowed from Arabic language.
 - b. Apply Practical instances of Arabic grammar and morphology using Luganda words borrowed from Arabic language.
 - c. Acquire big number of Arabic vocabularies using the easiest list of analyzed glossary for Luganda words borrowed from Arabic language (Kirembwe et, al.,2015).
 - d. Acquire more Luganda as well as English vocabularies throughout lexical syntactic comparison of entries.

2. Designing ALC Grammatical and Morphological Rules for UAB

Basically, the design of grammatical rules for ALC involve rules influencing the use of verbs, nouns and pronouns, prepositions, general and specific sentence

construction techniques. Whereas the design of morphological rules for ALC involve rules influencing the formation of noun structures including singular and plural, the formation of verb forms. It is important to note the fact that designing morphological rules for UAB is easy because the Luganda LDM has much to share with Arabic derivative morphology ADM. because both Luganda and Arabic use similar morphological arts for word expansion (Musad Muhammad Zayyad 2009; Katamba, Francis, 1978; Hyman, Larry M and Francis Katamba, 2001; 2003).

It is acceptable to assume that the application of ADM principles for Luganda wordlist art does not only standardize Luganda lexical application but it also develops Luganda lexical-arts to reach wider intellectual perspectives. It is also possible to enhance LDM as well as Luganda lexical-arts by applying ADM with LDM at three levels: the level of words that exist in Luganda language with Arabic origin and never changed which are referred to as Borrowed Luganda Words BLW; the level of words with Arabic words that exist in Luganda with Arabic origin but changed which are referred to as Borrowed Luganda Words Changed BLWC; and the level of the rest of Typical Luganda Words; which are referred to as TLW (Murphy,1972; Hyman, 1994; Kirembwe et al.,2013).

For instance, the following Figure 1 presents an instructional guide to using ADM for expanding ALC and provides easier pedagogical design for easier ALC acquisition. It is based on “phenomenography approach. In such a way, the students are free to choose whichever dimensions of words that deems easy for them to start with due to their various social- psychological experiences. The following Figure1 elaborates the guide to expand ALC using ADM principle, ALC synonyms and antonyms.

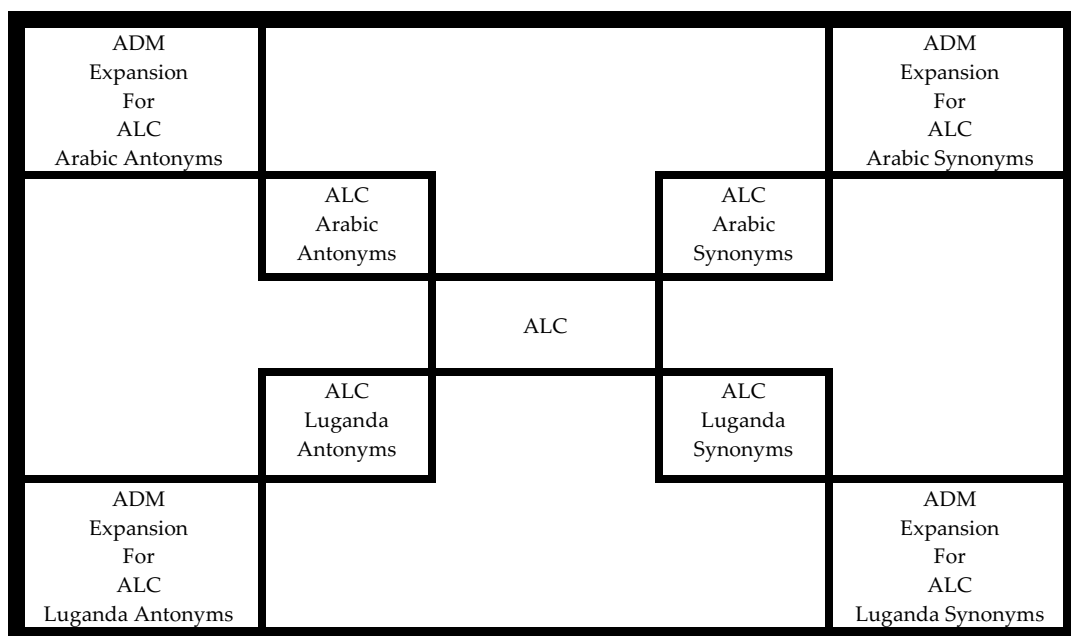


Figure 1: The Guide to Expand ALC using Arabic Derivative Morphology Synonyms and Antonyms

Key:

ALC =Arabic Linguistic Content

ADM =Arabic derivative morphology

The above Figure 1 signifies the development of ALC where the lessons are presented by the use of ALC derivations in such a way the students are free to choose whichever dimensions of ALC that deem easy for them to start with due to their various psychological experiences that can help them to come up with tremendous morphological expansions of the ALC by using ADM.

The Figure 1 is more on language education; it presents an instructional guide to using ADM for ALC and provides room for easier Arabic vocabulary acquisition. It is also based on “phenomenography approach. In such a way, the students are free to choose whichever dimensions of words that deems easy for them to start with due to their various social- psychological experiences.

(ALC) TECHNICAL DESIGN FOR (UAB)

The Major Aims of ALC technical design is to accomplish three main goals;

1. Determining the ALC Format
2. Determining the ALC instructional Strategy
3. Determining the ALC Evaluation Strategies

1. Determining the ALC Format

To determine ALC format the resource persons have to decide how to best impart the knowledge to the target audience. They designed both Face to Face as well as online teaching method, prepared a manual that the UAB will be able to study at their own pace, created an electronic ALC on a computer, and considered a blended ALC learning. This decision is made based on the preliminary analysis of the target audience and its characteristics, preferences, and habits. Hence, the resource person decides to try ALC out first with a few UAB participants and try some ALC instructions with them and do necessary adjustments.

2. Determining the ALC Instructional Strategy

To determine ALC instructional strategy the resource persons have to thing of the most relevant , ALC instructional strategy keeping in view of the following: (a) ALC Theoretical Model; (a)- ALC Instructional Framework; (c)- ALC Instructional Activities.

(i). ALC Instructional Model

The explicit approach to language learning imply that beside the prescribed ALC objectives the UAB may have more benefits than that in our minds. It is imperative then to clarify here that, the proposed ALC provides them with alternatives for ALC expansion knowing that different UAB have different interests, thus, they perceive different ALC differently. Hence, they choose different ALC point of view that attracts their attention. UAB will approach ALC from different dimensions due to their variations in the social-psychological experiences (Marton, & Saljo,1976).

The Dunkin and Biddle (1974)'s learning model suggests that the selected phonomyography learning strategies influence the achievement in ALC. This is due to the fact that learning outcomes are influenced by learning processes. The selected ALC instructional variables are highlighted in the following Figure 2:

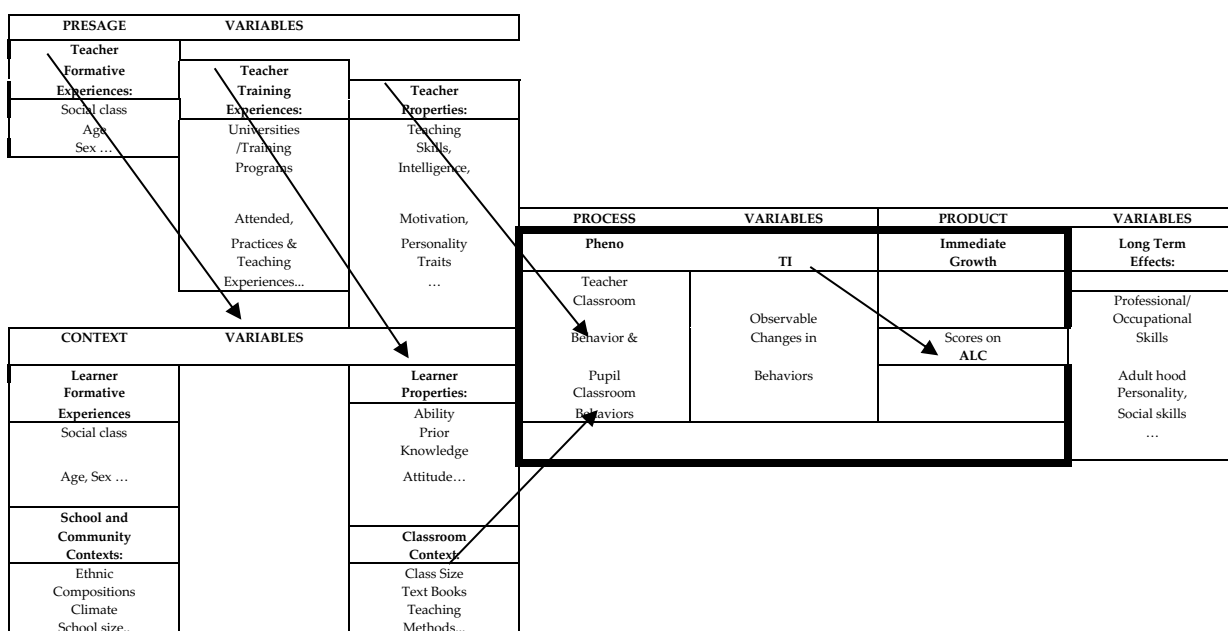


Figure 2: the Model for the Study of Classroom Teaching (Dunkin and Biddle, 1974.p.38; Coleman, Campbell, Hobson, Partland, Mood, Weinfeld, and York,1966; Weinstein and Mayer, 1984; Marton and Saljo's, 1976; Marton, 1988).

The Arrows= Refers to the hypothetical effects of Selected Instructional Strategies.

ALC = Arabic Linguistic Content

Pheno = Phonomyography Strategy.

TI= Traditional Instructions

The model for the study of classroom teaching by Dunkin and Biddle (1974) is particularly based on the explicit learning-based theories. The explicit learning theories including Dunkin and Biddle (1974) are recommendable for UAB because

they consider students, teaching methods, learning approaches and outcome as independent, interactive and correlated variables. Other explicit learning theories have a relationship with the model of Dunkin and Biddle (1974). Dunkin and Biddle (1974) classified the learning variables as: presage, contexts, process, and products. They believed in a linear progression from teachers and learners' contexts, through teaching activities to class achievements.

The emphasis of the explicit learning theories developed by Dunkin and Biddle (1974) is on student learning, not teaching and they believe that all explicit learning factors should mutually affect each other. Thus, students get a feel for the course and for the teacher once it is under way and they always revise their learning styles. Likewise, good teachers are sensitive to students' feedback, even at the most informal level. Then they revise their teaching and assessment techniques.

Thus, the tasks in the explicit learning process for UAB should be considered in relation to UAB' expectations, prior relevant knowledge and preferred or stabilized approaches to learning. The tasks in the processes of explicit learning are also considered in relation to UAB' perceptions of task demands arising from the requirements of teaching context. Then, feedback on the task processing from the student's point of view involves meta-cognition, awareness and control over task processing.

According to Dunkin and Biddle (1974) student's point of view is not something that the student runs, but which is planned, monitored, and if necessary revised due to progress and to perceptions of task requirements. Nevertheless, the selection of the research variables in the learning model of Dunkin & Biddle (1974) is also based on the implications of other learning research and theories.

Therefore, it becomes clear that the model of classroom learning by Dunkin & Biddle (1974) is based on the explicit classroom learning theories. The explicit classroom learning theories believe in the idea that all human behavior is learnt and has a relationship with external variables. Such theories are referred to as behaviorism and sometimes referred to as Piagetianism. The classroom learning theories in question have much to do with cognitive psychology.

They also apply the information processing constructs which are the current academic versions of classroom learning such as a Phenomenography model (Marton and Saljo's 1976; Marton, 1988). Most of the classroom learning theories that are related with the model of Dunkin & Biddle (1974) are like the rest of intellectual construction theories in such a way that their investigations capitalize on one or more of the basic components in the learning contexts.

Putting into consideration the effects of ALC design on Arabic achievements and factors influencing the learning process it is necessary to describe the theoretical model of explicit learning dealt with in this study. The theoretical model adaptable for ALC instructions among others is the model of learning by Dunkin and Biddle (1974). The development of this model was an attempt to illustrate the complexity of the teaching environment and to show various variables that affect students' learning. Dunkin and Biddle (1974)'s model was also intended to help those who try to understand the effectiveness of instructional research. The theory of Dunkin and Biddle (1974) grouped learning variables into four groups: presage variables, process variables, context variables and product variables.

* The presage variables comprise of attributes and characteristics variables of teachers. They are teachers' variables that are already in existence which are controllable. The presage variables also include teachers' formative experiences that relate to socio-economic status, age and sex. Among the presage variables are also teachers' training pertaining to academic and vocational experiences. The presage variables include teachers' properties. The teachers' properties are permanent personality traits of teachers irrespective of their formative training experiences. The teachers' properties include: teaching ability, intelligence, and motivation.

* The context variables refer to the characteristics of learning environment which are not easy to control. For instance, context variables include UAB' formative experiences, UAB' properties, venue, virtual platform, school and learning community. UAB' formative experiences are comprised of social variables such as social skills, gender, age, SES. Whereas UAB' properties include the social-psychological variables, such as UAB' abilities, prior knowledge and attitudes. Among the context variables are the classroom, school and the learning community. These comprise of the learning environment at school, such as ethnic composition, time and climate at the school and in the classroom. The context variables also include instructional methods and instructional materials.

* The process variables refer to UAB activities, behaviors and teachers in the venue. Some of UAB process variables are observable and controllable.

* The product variables are the learning outcomes which result from the learning activities. Among the instances of product variables are immediate learning achievements, such as: academic scores, mastery of social skills, development of cognitive, affective, and psychomotor skills. The product variables, on another hand, refer to long term achievements such as providing UAB with foundations and readiness to become good citizens. In most cases, whatever the product variables are designed for immediate learning objectives though they maintain a relationship with long term learning goals (Dunkin and Biddle,1974).

Different explicit theories have different uses, but some are more useful than others in specific situations. The instances of the explicit theories that are related to the model of student learning by Dunkin & Biddle (1974) are: 1. student-based theories, 2. teacher-based theories and 3. process-based theories. There is also a contemporary learning theory referred to as a 4. phenomenography theory.

1. Student-Based Theories

The focus of the student-based theory is on qualities inherent in the student. Student qualities are believed to have a powerful effect on learning outcomes. Therefore, the student-based theories include UAB abilities, prior knowledge, motivation, personality facts, social skills, sex, age, SES, learning styles and the like. Most of these factors focus on observable individual traits which are thought to independently affect the nature of learning outcome or particular learning contexts. The essence of the student-based theory is like ability or socio-economic status. The UAB own learning factors are considered to be more important than instructional factors in determining educational outcomes (Coleman et al.,1966).

2. Teacher-Based Theories

The teacher-based theories are sometimes referred to as the traditional staff-development model, where the focus is on the teacher and on the development of teaching skills. Teachers' training pertaining to different academic and vocational experiences are important factors in the teacher-based theories. Such theories see the teacher as the prime actor, who should display a mastery of teaching skills and other indicators of good teaching.

3. Process-Based Theories

The process-based theories are based on information processing psychology. The interest of process-based theories is in the efficiency with which the basic cognitive strategies are deployed. The emphasis here is not upon individual characteristics of teachers and learners, but upon the cognitive strategies that students may be trained to use when handling tasks (Weinstein and Mayer 1984). The material being elaborated or rehearsed in the process-based theories is always prepared for an examination or for a laboratory experiment. Then the applied methods, skills of problem solving are derived from the information processing models. UAB are trained to use appropriate strategies or learning skills in ALC context of training session. Thereupon, UAB are required to use these ALC skills in the actual work settings (Polay's, 1945).

The explicit learning theories discussed earlier are components of Dunkin & Biddle (1974). Based on such theories one should assume that the insufficient learning outcome is seen due to lack of a certain learning factor, either in a student, a teaching process or in skills the student should have been trained to do. To improve learning outcomes the learner or teacher has to add in the missing factors. It may occasionally be the case that such assumptions result in learning improvements, but on the other hand this assumption seems to underestimate a real situation where UAB and teachers are dealing with a complex system of psychological variables.

4.The Phenomenography Theory

Among the theories that are related to the learning model of Dunkin & Biddle (1974) is a learning theory referred to as phenomenography. The phenomenography is a highly influential method in the student learning literature. The phenomenographic learning models consider the integration of learners' properties and learners' experience with learning products. The phenomenography models also apply the surface and deep approaches to learning. They believe in the relationship of surface and deep approaches to learning with the quality of the learning outcomes. Among the common sources of phenomenography models of learning are Marton and Saljo (1976), and Marton (1988).

In the phenomenographic theories learning is viewed from the perspective of the learner, not from that of the teacher or the resource person. The goal here is to see how students comprehend the ALC which is expressed in a complex form of relationships that UAB acquired knowledge sets up with the already known concepts.

Usually, the procedures and outcomes of such explicit theories could be expressed in a limited number of hierarchically ordered objectives. Some learners may have partial or distorted conceptions of the intended topic objectives, while other learners may have sophisticated conceptions. Learners may comprehend, more or less, the teacher's perspective, but they genuinely learn only what they construct from their own perspective. According to phenomenographic theories learners' approach to learning is viewed from the perspective of how they go about making constructions. That is because the way in which learners experience a phenomenon constitutes different perceptions of the phenomenon.

A number instructional research that are in line with the model of Dunkin and Biddle (1974) investigated explicit learning variables. they indicate that students must engage in the strategies of learning so that they can build connections between new knowledge and prior knowledge. They indicate that students need to possess and utilize meta-cognitive knowledge that helps them to control their thinking. They further agree with principles of ALC phonomyography learning strategies; They

assert that students must believe that they are responsible for their learning (Seifert & Wheeler, 1994; Borkowski, Weyhing, & Carr, 1988; Brown, & Palincsar, 1982; Borkowski, Carr, Rellinger, & Pressley, 1990).

Further descriptions of the hypothetical effects of ALC design on ALC achievement are provided in the following Figure 3 which presents the hypothetical ALC research framework. The figure 3 also provides a clue about the effects the interactions among the selected Arabic Linguistic Content ALC and Linguistic Content Strategy ALCS versus Traditional Instructions TI.

(2) ALC Instructional Framework

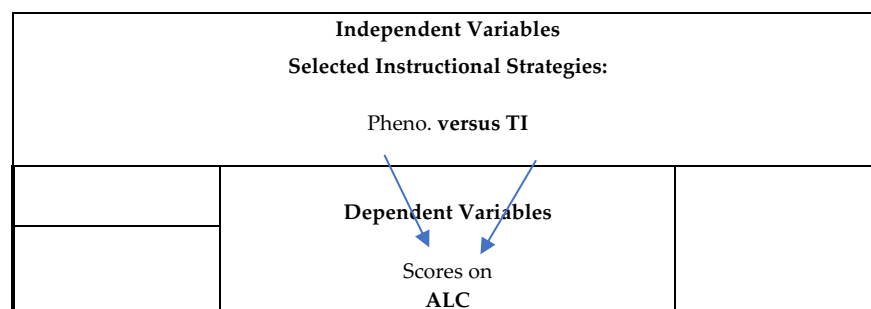


Figure 3: ALC Instructional Framework

Key:

The Arrows= Refers to the hypothetical effects of Selected Instructional Strategies.

ALC = Arabic Linguistic Content

Pheno = Phonomyography Strategy.

TI= Traditional Instructions

This framework indicates that, there is a significant difference among UAB achievements in Arabic language skills when the ALC versus the traditional instructions are used to teach Arabic language skills. In other words, the above research framework implies that ALC learning strategies and the traditional instructions influence students' achievements in Arabic language skills differently. Therefore, in addition to the ALC design effects of the on Arabic learning outcomes Dunkin and Biddle (1974)'s learning model calls for the observation of other learning variables that may have a significant relationship with the Arabic learning outcomes (Dunkin and Biddle, 1974).

(3) ALC Instructional Activities

The education strategy is comprised of lectures, discussions, tasks, tests, projects, and supplementary materials meant to help the students better understand of ALC material. All of these strategies fulfill the four main goals of the education strategy: i. ALC Preliminary Activity, ii. Presentation of ALC Material, iii. ALC Practice and iv. ALC Post- Activity.

i. ALC Preliminary Activity

The main goal of preliminary activity is to let the students know what topics will be covered in a particular section of ALC and motivate them by explaining the advantages of possessing the knowledge and skills that will be imparted to them during the education process. Motivating the students make them more patient, and also more interested in completing their education. At this stage it is beneficial to tell the students about the goals of ALC, as it will help them understand the global structure of ALC, and also how they would be able to apply the obtained knowledge after completing ALC.

ii. Presentation of ALC Material

Make an effort to keep ALC concise and avoid unnecessary details. Leave everything unrelated to the skills ALC aims to teach on the cutting floor. Make sure to include a few examples to help the students understand the material better.

iii. ALC Practice

It is vital to enable the students to practice what they are being taught. The amount of practice a learner gets while taking ALC and after completing it directly corresponds to how quickly and well, he or she obtains ALC skills. Providing timely feedback on the completed tasks is equally important - it helps the students better understand the material and improve their ALC skills.

iv. ALC Post- Activity

After the students have completed ALC, it is beneficial to hold a meeting with them to discuss the results. This is a good opportunity to summarize the main idea of ALC and its goals, which will help the students to better retain and remember the knowledge obtained while taking ALC, and start applying it in their everyday jobs. This is also a chance for the students to ask questions about some specific topics covered in ALC they did not understand very well.

3. ALC Evaluation Strategies

The instructors are meant to define the results that students have to achieve for ALC to be considered a success. They also have to decide on the correct way to determine whether the students have reached the stated goals of ALC to gauge the effectiveness of ALC.

Just like any educational planning, we always start with (the end); also known as (backward design), where we clarify first what students know or can do by the end of the learning experience. Then we look backward toward the beginning with the knowledge of what students have to be told, how they will need to practice, and how we assess them.

When we teach, we first agree on the educational goals or what students will know and be able to do when they have completed the program. This approach creates intentionality rather than leaving learning to chance. The next step is to translate these goals into measurable student learning outcomes' statements that describe significant and essential learning that students have achieved and can reliably demonstrate when they have completed the course.

In curriculum design we establish the learning priorities. We also communicate a unified vision of what we intend students will be able to achieve upon completion of the course; The necessity of communicate how learning experiences contribute to learning throughout the course. We apply methods for assessing student achievement of the expected core student learning outcomes within the context of the course; we also use the evaluation results to improve student learning and course effectiveness.

It is important to choose a way of rating the students that clearly shows whether they have acquired the knowledge ALC is meant to impart, and if the obtained skills meet the requirements set for ALC. The information the resource person gathers about ALC's target audience will come in handy during this stage, as greatly impact the choice of the method for grading the students results. The students age and their technical proficiency determine what tasks the resource person sets for them to test their knowledge, they also has much to do with the way the resource person phrases the questions. It is also advisable to pick the correct type of test; it is important to consider the goals set before the students. If ALC is meant to primarily broaden their knowledge, a standard test consisting of Multiple Choice and True/False questions will be adequate.

However, if ALC is meant, for example, to teach the students to teach other non-structured language arts' proficiently, it would be better to have the students complete real-life tasks practical skills acquired by the students. Keep in mind though that the final scoring is not a goal in itself. It is important to monitor the students progress throughout the duration of ALC courses to make sure that they are able to grasp the main concepts and ALC ideas ALC designed for them.

CONCLUSION AND RECOMMENDATIONS

ALC design is meant to accomplish three main goals including designing the: grammatical, morphological as well as lexical content. Whereas the Major focus of ALC technical design is meant to achieve three main goals; deciding on ALC format, developing ALC instructional strategy and developing ALC evaluation strategies. Thus examine the suitability of the chosen grammar, morphology and lexical content for the target community.

The design of ALC for UAB is centered on two major components ALC content and ALC technical design. Thus, it is recommendable for ALC designers beside lexical designs to consult various ALC formats, instructional strategies, and ALC evaluation strategies.

The development of ALC format includes the guide to expand ALC using Arabic derivative morphology synonyms and antonyms. Thus, it is recommendable for ALC designers to consult relevant local language wordlists so that they may integrate the ALC lexical expansions with the matching local vocabularies borrowed from Arabic language.

Both Face to Face and online teaching methods are necessary for ALC delivery which calls for the computer assisted ALC learning to be integrated in ALC design. Hence, it is recommendable for ALC designers beside the traditional modes of linguistic delivery to consider the design of computer assisted ALC learning.

The ALC instructional strategy encompasses (i) ALC theoretical model, (ii)- ALC instructional framework, and (iii)- ALC instructional activities. Thus, it is appealing to the resource persons and ALC designers to examine the most effective ALC instructional strategy for UAB that systematically extract the achievement of ALC designed goals and objectives.

ALC evaluation strategies encompass designing ALC learning outcomes, teaching and learning as well as ALC assessment strategies. Hence, there is a great necessity for the ALC resource persons and designers to examine most relevant ALC course outlines, whose evaluation objectives are compatible with UAB learning

The more effort and care the resource person puts into the design procedures the less time they need for ALC development, delivery and assessment. Thus Such a theoretical analyses of ALC design is recommendable for the implementation of ALC curriculum and instructional designers, researchers and academic experimenters in favor of ALC for UAB.

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ADEQUACY OF COMPENSATION IN LAND ACQUISITION PROCEEDINGS FOR PUBLIC INFRASTRUCTURE

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Abstract

The Federal Government as well as State Government through its various agencies responsible for any development for public purpose. Acquisition of land includes compensation costs that need to be paid to the interested aggrieved parties. The issues of compensation are highly arguable in the proceedings as well as in the court. This article uses qualitative methods through interviews and document analysis. This study found current compensation is legally based on the current legal proposition. However, there is a need to further explore the adequacy of compensation in land acquisition proceedings.

Keywords: land acquisition, public purpose, compensation.

INTRODUCTION

Land acquisition is one of the options to acquire the required land for development, especially for public purposes. The potential land will be marked and surveyed for that particular development purpose. When the land is finalized, the Federal Government through the Department of Director General of Land and Mines (DGLM) will process the acquisition of the specific land mentioned. In cases of development under State Authority, the State Director of Land and Mines Office will be responsible for the land acquisition. For example, for the project for the construction of the railway route, the government through the Ministry of Transport, for example, will finalise the route track and submitted it to DGLM's office for land acquisition especially acquisition under Land Acquisition Act 1960 [Act 486].

The specified land will then be acquired if falls under individual titles. As per Article 13 of the Federal Constitution, its emphasizes inter alia that there is no land acquired by the government without adequate compensation. As such, the government needs to allocate a certain amount of development expenditure for the acquisition process including the payment of adequate compensation to the landowner and the aggrieved parties within the total development and construction cost.

The compensation amount is usually depending on the valuation made by the Valuation and Property Services Department (JPPH). The compensation shall consider the market value of the land, severance cost, injurious affection value, and other expenditures related to the land acquisition. However, it must not include the loss of earnings and value of the vegetation as it is included under the land value. Nevertheless, any structure on the land can be considered for compensation.

METHODOLOGY

The research was carried out in a qualitative method. The method includes the research on the primary sources from the interview of an informant from the related department such as the Valuation and Property Services Department, the Department of Director General of Land and Mines, and the state Land and Mines office.

Besides, the research also examines the secondary sources of written documents. These include documents such as books, journals, case reports, legal reports, annual reports, statutes, policies, articles, and materials both from printed publications and from the internet.

Not to mention the tertiary sources as well, the previous research and earlier findings are also investigated and reviewed. Data gathered is analysed through the comparative method.

RESULT AND DISCUSSION

Adequacy Of Compensation

The question of adequate compensation is the point of argument and contentious matter. The current situation under the law and practices through several rules and regulations are limited to the established ground stated in the Land Acquisition Act 1960 [Act 486]. However, through amendment of the law in the National Land Code [Act 828] (NLC), Strata Titles Act 1985 [Act 318], and Land Acquisition Act 1960 [Act 486], there are several emerging grounds that are hardly considered in the valuation for compensation especially rightful enjoyment of underground land, airspace and intangible element such as noise compensation. The Land Acquisition Act 1960 [Act 486] only mentioned specific items which can be compensated by the land administrator during the hearing and enquiry for the payment of compensation of the acquired land.

As amendment of the legislation takes place for a certain area in construction and development in NLC, Act 318 and Act 486, the heading of the payment for compensation needs to be reviewed legally and practically. Current development

which involves the new approach to construction may lead to an extra grievance for the parties involved, especially the landowner. The approach of underground construction such as tunnels and acquisition of part of strata scheme for public amenities and infrastructure had given a new paradigm in adequate compensation regime.

In addition, in comparison to other countries, it is found that several countries in Europe had provided extensive compensation such as noise compensation towards the development project proposed. For example, the construction of housing development in the United Kingdom recognized the compensation for noise pollution. On the contrary, there is also a discussion on the noise compensation shall not be paid. The discussion seems to view that the traffic noise compensation will open to bigger uncertainty (Setter D.M, 1980).

As such, these emerging claims had been coined by several landowners and aggrieved parties that need to be addressed for upholding the adequate compensation principle mentioned under the Federal Constitution of Malaysia.

Current Legal Framework

Land Acquisition is the prerogative act of the government as prescribed under the Land Acquisition Act 1960 [Act 486] as well as Federal Constitution. Article 13 of the Federal Constitution provides that the government can acquire the property from the registered owner in the course of public purpose. The Article says:

“Rights to property

13. (1) No person shall be deprived of property save in accordance with law.

(2) No law shall provide for the compulsory acquisition or use of property without adequate compensation.”

In the case of land acquisition, the Land Acquisition Act 1960 [Act486] has fulfilled the first limb of Article 13 of the Federal Constitution. The law related to the acquisition of the land seems to deprive the rights of the landowner or the interested parties therein. Thus, Act 486 is in place to fulfil the requirement. Currently, all land acquisition processes for government construction or projects especially for public purposes are conducted by the Department of Director General of Lands and Mines (Federal) (DGLM).

The second limbs of the Articles require payment of compensation in the process of land acquisition. The heading for compensation has been stipulated in Act 486 itself

under the First Schedule. Additionally, the payment of compensation is also subjected to the term of reference which is mentioned by the circular of DGLM. Payment of compensation among others includes injurious affection and severity, house and building, and the cost needs to be borne immediately for resettlement such as rent (Manual Pengambilan Tanah, 2008).

The market price issue is also one of the contentious matters in deciding the value of compensation. The market price has been addressed as early as 1984 when the court said that it depends on the “willing buyer and willing seller” concept. There are several other issues that relate to the market value such as partial payment to the registered proprietor because of a re-surrender for the right of way. This partial payment however is not the right practice although there are no cases decided on the matter yet.

Any other compensation, which is not covered by Act 486, requested by the registered proprietor is denied. It is worth to emphasise that loss of earnings is not a factor to be considered as an amount for compensation. Similarly, vegetation on the land also is not to be calculated separately. Though the environmental aspects are not heavily mentioned in the compensation, there is certain case request for noise compensation.

It seems rather difficult to access noise value and amount of compensation. Usually, noise pollution can be claimed under a civil suit against the developer and any compensation brought before the court (Li Rita, 2011). As the land acquisition is mainly led by the government, this issue is abandoned. Similarly, the issue of ex gratia may be applied in this situation as given and granted to the squatters within the vicinity of the project sites.

Adequate compensation which is mentioned earlier under Federal Constitution is now moving to a new phase where several demands have been made by the developer on the ground. Cases on the intangible value for compensation are usually failed to be recognized. Whether in the initial process in the land office or appeal cases in the court of law. For example, cases of noise pollution claim had been struck out as it seems to be no merits¹. However, the judgment did not refer directly to the noise pollution issue but rather the vicinity and neighbourhood of it to construct the market price value as it is 2 kilometres away from the intended acquired land. As such, there is no noise pollution compensation granted in the course of land acquisition.

¹ Yu Kuan Huat & Ors V. Pentadbir Tanah Wilayah Persekutuan Kuala Lumpur [2011] 1 LNS 1596

Regarding noise pollution, the current legal framework is governed by the Department of Environmental. Section 23 under The Environmental Quality Act 1974 [Act 127] stipulates that:

“No person shall, unless licensed, emit or cause or permit to be emitted any noise greater in volume, intensity or quality in contravention of the acceptable conditions specified under section 21.”

As such, DOE had come out with guidelines on *“The Planning Guidelines for Environmental Noise Limits and Control”* in 2004, reprinted in 2007, and revised further in 2019.

It states that approval of projects subjected to Environmental Impact Assessment (EIA) procedures and requirements usually include maximum permissible noise limits in the affected areas that must be complied with during the construction phase and/or operation of the project. Further, the guidelines provide that the maximum permissible sound level by receiving land use for planning and new development in a residential area is between 60 dB to 65 dB during daytime and night (MESTECC, 2019). However, this maximum level is only a guideline that the Local Authority can impose on the planning permission and approval. Thus, it is not legally supported by laws.

Meanwhile, the meaning of adequate compensation has different interpretations in different countries. In the United States, the market value of the subject property is generally held as just compensation for the dispossessed owner. In the UK, compensation is based on the principle of value to the owner that is made up of market value together with other losses suffered by the claimant. This principle is broadly followed in most Commonwealth countries and regions such as Australia and Hong Kong.

In China, the current compensation laws are far from adequate, due to the just terms compensation principle not being in a place which has caused great discontent. In Germany, a similar principle seems to be adopted in Malaysia’s Federal Constitution and the Land Acquisition Act 1960 (Schmidt-Eichstaedt, Gerd, 2007). Similarly, in the Netherlands, they differentiate the compensation for expropriation, which is similar to land acquisition, from the compensation of planning law (Hobma F, 2007).

Noise Compensation

Noise compensation under land acquisition is not a good ground (Che Roslan, 2021). As such, there is no trace of requirement found in Malaysian legislation and

judgment. It is hard to find the specific compensation judgment for compensation for noise under the land acquisition process. This can lead to misunderstanding of the issue and open for discussion. As opposed to the claim under civil suit particularly tort, the requirement of noise compensation is depending on the tolerable value.

Nevertheless, it is discussed also that the term compensation is used in several other statutes. It has a well-understood meaning in respect of workers' compensation. It has a different meaning from damages in the law of contract and tort. When used in the context of deprivation of land it means to *recompense or amends* (Anuar Alias, 2006).

Therefore, the requirement for noise compensation in Malaysia may be derived from non-compliance with the requirement of the maximum permissible level of noise. The possibility of including the compensation for noise compensation is hardly proven and less discuss within the scope of land acquisition. In addition, the proposed level is only under guidelines which are not legally binding upon the developer. The need to have legislation, particularly emphasis on this is a must and believed to be a good move. Thus, it is needed to study this gap.

Compensation Principles Comparison

In the United Kingdom, the land acquisition process is governed by the Compulsory Purchase Act of 1965. The Act is quite similar to the Malaysian Land Acquisition Act 1960 [Act 486] in the acquisition of land for development. As such, the similar context of those Acts is to gain land from private individual ownership for the purpose of the development whether at the national public level or part thereof.

The Compulsory Purchase Act will be read together with the Land Compensation Act of 1973 of the United Kingdom. The Act did not specifically provide for noise compensation in the wording of the Act. However, Land Tribunal has the power to decide on the compensation which can be granted to the landowner. Moreover, the said claim for noise, vibration, etc. is said to be dealt with under the Land Compensation Act, not the Compulsory Purchase Act (Purdue M, 2006). Thus, the differentiation of the intervention of the Act needs to be scrutinized in the study.

CONCLUSION

Besides the issue of noise compensation, other issues relating to the current development and construction approach also play detrimental elements in the adequacy of the compensation. Amendment to the legal provision of the National Land Code [Act 828], Land Acquisition Act 1960 [Act 486], and Strata Titles Act 1985

[Act 318] provides several consequential impacts on the current approach to development².

The acquisition of underground land, for example, is now very popular for railway's lines such as Mass Rapid Transit (MRT) and East Coast Railways Lane (ECRL). The provision for the acquisition of the underground land has been made possible by an amendment in the NLC and Act 486.

However, the compensation for the right acquired for underground land is hard to be measured and award. The construction of an underground tunnel for the railways is very vital in developed and dense areas such as the city of Kuala Lumpur and other major cities. These high-density areas are already occupied by a huge amount of interested parties. Landowners, occupiers, and also financial institutions are fighting for their rights if the lands are needed for development.

These emerging issues and approaches give rise to the definition of rightful enjoyment provided under the NLC³. The enjoyment of the landowner or proprietor of the land is only subjected to a certain depth underground. Thus, the question that the acquisition of the underground land is now subjected to compensation or not needs to be clarified. There is a case at this point, but the case has not been legally decided yet.

As a conclusion, it is detrimental to study the gap on the issue and question why there is no discussion and implementation of the adequacy of compensation in the land acquisition process.

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A SYSTEMATIC REVIEW OF ISSUES AND CHALLENGES OF MICRO TAKAFUL FINANCING THROUGH ZAKAT AND WAQF FUNDS IN MALAYSIA

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Abstract

Micro takaful protection is vital to the low-income population, providing them with affordable financial and health protection. However, the uptake of micro takaful schemes is still scarce due to the reduction of its operational and promotional costs. This systematic review study aims to collect, analyse and discuss academic literature from relevant journal articles related to the issues and challenges of micro takaful financing through zakat and waqf funds using the PRISMA method. A search using Scopus, MyJurnal and Google Scholar academic databases for this study resulted in a total of 47 documents. After going through the screening processes outlined by PRISMA, 11 journal articles were accepted as the literature of this study. The issues and challenges of micro takaful financing through zakat and waqf funds in Malaysia are related to the ownership (al- tamlīk) of zakat funds, limitations of legal provisions, high operating cost and common understanding from the community. Therefore, this review suggests publishing more journal articles on the related study field to develop a practical and sustainable micro takaful financing framework through zakat and waqf funds.

Keywords: *Micro Takaful, Zakat, Waqf, B40, PRISMA.*

INTRODUCTION

Background

According to Bank Negara Malaysia (BNM), micro takaful is a takaful product designed to meet the financial protection needs of low-income households (Bank Negara Malaysia, 2016). Financial protection from the above definition means that it is accessible within the required period of time and has sufficient financial resources to 1) meet major expenses; or 2) provide financial facilities permanently or temporarily to reduce the financial burden caused by various types of unexpected adverse risks. Plus, low-income households refer to the poor, vulnerable or lower class of middle-income families; those who have previously been excluded from obtaining access to takaful services. Therefore, from the definition, it can be understood that micro takaful offering intends to open up opportunities for low-income communities, especially the

poor, to obtain takaful services at affordable prices. This approach is demonstrated in micro takaful schemes, which offer lower contribution fees than mainstream takaful schemes in the market.

Micro takaful has been introduced in Malaysia through the Financial Sector Plan 2011-2020, which urges insurance and takaful companies to develop micro-concept takaful products (Abdullah et al., 2019). In this regard, micro takaful products began to enter the market with takaful contribution fees as low as RM5 per month, such as Perlindungan Tenang, Tabarru' Koperasi Scheme, SSPN i-Plus, Takaful Hayati and PruBSN Microtakaful Jariyah (MTJ). The low contribution fees offered in micro takaful product is suitable for the B40 group (the Bottom 40% of the Malaysian household income), who are only willing to contribute RM5-RM10 per month for basic coverage such as funeral costs, minor surgeries and emergency treatments, while RM10-RM15 per month for critical illnesses (Abdullah et al., 2019; Htay et al., 2015).

However, financial constraints are still a significant barrier for B40, especially for patients with chronic or critical illnesses. Such diseases often require expensive medical procedures and long-term treatment sessions that are burdensome for the population. The situation becomes more suffocated when medical costs increase every year. This situation exists since Malaysia is recorded as the third highest country for the rising medical inflation rate after India and Indonesia (Kaur, 2018). Therefore, it burdens not only micro takaful contributors among the B40 group to participate in the micro takaful protection schemes but also restricts micro takaful companies from offering comprehensive protection to their customers due to the considerable risks of losses.

Objective

As solutions to the problems, studies suggest that micro takaful protection schemes for the B40 should be funded through zakat and waqf funds. This systematic literature review is needed to analyse the issues and challenges of its implementation in the existing literature. This study also intends to fill the absence of a systematic review paper on this topic. In summary, this study sets several objectives as follows:

1. Collects, records and reports literature sources on micro takaful financing through zakat and waqf funds using the PRISMA method;
2. Discusses the challenges in implementing micro takaful financing through zakat and waqf funds as stated in the relevant literature; and
3. Reviews proposed solutions to the issues and challenges stated in the literature.

METHODOLOGY

This systematic review study was conducted using the Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) method. PRISMA methodology is a guideline for researchers to conduct a systematic review study. It aims to help researchers state the appropriateness of systematic review research, report the research methodology and discuss the results of literature review research that have been implemented transparently and accurately (Page et al., 2021). Page et al. (2021) also indicate that the PRISMA 2009 statement - and subsequently the PRISMA 2020 statement - was developed to address the weaknesses of the existing systematic review. It includes 27 suggested items for reporting a systematic review study, detailed with reporting guidelines for each item and its examples. These suggestions have been widely accepted, recognised by various journals and adopted in many research disciplines.

This study searched through three online academic databases, namely Scopus, MyJurnal and Google Scholar, on the selected keywords. The selection of these databases was based on the advantages and accessibility possessed by each database when entering specific keywords for this study. As an introduction, Scopus is the largest database of abstracts and citations containing scientific literature such as scientific journals, books and proceedings of scientific conferences (Scopus, n.d.). MyJurnal is an online system used by the Citation and Infometrics Center to collect and index journals in Malaysia (Citation & Infometrics Centre, n.d.). At the same time, Google Scholar is a search engine website built specifically for searching scientific literature and academic sources (Sam Houston State University, n.d.). A basic search was conducted on Scopus, MyJurnal and Google Scholar websites with keywords of 'takaful mikro', 'micro takaful', 'zakat', 'zakah', 'wakaf' and 'waqf' separately. Table 1 shows the search results as follows:

Online Academic Database	Results for Keyword Search						Total
	'takaful mikro'	'micro takaful'	'zakat'	'zakah'	'wakaf'	'waqf'	
Scopus	0	12	675	101	35	700	1,523
MyJurnal	6	0	374	46	149	251	826
Google Scholar	2,640	3,870	407,000	13,100	69,000	46,600	545,210
Total							547,559

Table 1. Basic Search Results for Specific Keywords through Scopus, MyJurnal and Google Scholar Academic Databases

The search results briefly describe each academic database's access to any academic study based on the keywords entered into the search box. MyJurnal

recorded the lowest cumulative search results for the keywords because it limits the search to publications in Malaysia only. In addition, searches through the MyJurnal database must be selected by a specific document type, such as journals, articles, authors and institutions. In this case, this study chose journal articles as the source of the study. MyJurnal does not have a Boolean operator function to enter two keywords simultaneously in the search box. Thus, searching keywords using the Boolean operator does not yield any results.

Search through the Scopus database showed an intermediate number of results compared to MyJurnal and Google Scholar, even though it is an international academic database. This event happens because Scopus values publication quality at its best. For example, in 2017, Scopus had already discontinued the publication of the entire content of low-performing journals as already listed on Beall's List of Potential Predatory Journals and Publishers (McCullough, 2021). As explained, searches in Scopus are also limited to collecting English-language academic resources. Next, search results in the Google Scholar academic database recorded the highest number of entries, more than 200 times the number of search results in Scopus and MyJurnal altogether. It is due to the extensive search system of Google Scholar, which is not limited to a particular language, the publication quality, the type of publication, or even the publication limits within a specific country. In short, it generates searches through all available resources uploaded to the internet. Therefore, a search through Google Scholar should be done with some limitations according to the requirements of the study by using more detailed keywords.

Table 2 shows the search results for specific entries in each academic database, where those entries include all keywords related to this systematic literature review. Since Scopus only states results for scholarly resources in English, the keywords 'micro takaful' and 'wakaf' are not entered in the search box. However, the keyword 'zakat' is included in the search because the word is sometimes not changed into 'zakah' as a corresponding transliteration of the word 'zakat' in English. This event occurs in a document entitled "An analysis of the viability of micro health takaful in Malaysia", which showed up as a search result from the Scopus database.

The search through Google Scholar, on the other hand, needs to be more detailed since the scope of the search is extensive and not limited, as mentioned before. Therefore, in addition to entering relevant keywords in the Google Scholar search box, the word 'Malaysia' is also included to limit the search only to existing academic studies in Malaysia or concerning Malaysia as the content of the study. Furthermore, both searches in Scopus and Google Scholar use the Boolean operators of 'AND' and 'OR' with no specific publication year included. As a result, a total of 47 academic documents were collected through the search. Entries for searches in the Scopus,

MyJurnal and Google Scholar databases and the total number of search results can be analysed in table 2.

Online Academic Database	Entries Entered in the Search Field	Number of Articles
Scopus	(micro takaful AND waqf) OR (micro takaful AND zakah) OR (micro takaful AND zakat)	4
MyJurnal	takaful mikro	6
Google Scholar	(micro takaful) OR (takaful mikro) OR (micro takaful AND zakah) OR (micro takaful AND zakat) OR (takaful mikro AND zakah) OR (takaful mikro AND zakat) OR (micro takaful AND waqf) OR (takaful mikro AND wakaf) "Malaysia"	37
Total		47

Table 2. Total Number of Academic Articles Resulted from Online Academic Databases Through Searches on Specific Entries of The Study

Next, the 47 documents were listed using Microsoft Excel software to facilitate further screening and analysis. The next step for this systematic review study was to filter the search results of academic documents collected through the searches by excluding document duplication. Three overlapped documents are out of the total, making the actual number of documents 44. The initial document screening process is also done based on specific criteria following the objectives and needs of the study as follows:

Criteria	Accepted	Filtered
Language	Malay, English and Arabic	Other than Malay, English and Arabic
Type of Literature	Journal article	Other than journal articles such as theses, proceedings, books and chapters in books
Location of Case Study	Malaysia	Other than Malaysia, like Indonesia, Nigeria and Brunei
Scope of Study	Micro takaful financing	Other than micro takaful financings, such as small and medium enterprises (SME) financing and microfinancing

Table 3. Accepted and Filtered Criteria for Academic Documents from Database Searches

The screening process of academic documents through the criteria shown above resulted in no documents written in languages other than Malay or English. In addition, ten documents are not published as journal articles, 12 documents are not

related to Malaysia, and 26 documents do not discuss micro takaful financing. Therefore, based on the screening results, four documents do not meet three literature selection criteria in this study and 11 documents do not meet two selection criteria. Thus, the number of documents that did not meet the literature selection criteria in this study was 29 out of 44 documents screened. This result makes only 15 journal articles selected for the following screening process through the analysis of abstracts and the entire content of the articles.

RESULTS

The analysis of abstracts and the full content of the 15 screened journals will be assessed based on their discussions and results related to micro takaful financing through zakat and waqf funds, focusing on the issues and challenges upon its implementation. However, four articles do not discuss such topics as stated upon examination. Accordingly, only 11 journal articles were accepted for this systematic review. The PRISMA flow chart diagram (figure 3) shows the methodology's screening results.

The 11 journal articles accepted for this systematic literature review were then analysed according to the number of authors and year of publication to identify any patterns in the literature on issues and challenges of micro takaful financing through zakat and waqf funds in Malaysia. The number of authors is divided into four: 1) one author; 2) two authors; 3) three authors; and 4) four or more authors in an article. The study's results recorded only one article written by one author, while two articles had two authors, and three articles were written by three. The numbers resulted in 9.1% for articles with one author, 18.2% for articles with two authors and 27.3% for articles with three authors. 45.4% or five articles have four or more authors. The category of four or more authors records the highest number of authors out of the total 11 literature in this study.

Table 4. Number of Authors for Journal Articles According to Search Results of Each Academic Database

No.	Number of Authors	Online Academic Database			Total	Percentage (%)
		Scopus	MyJurnal	Google Scholar		
1.	One	0	0	1	1	9.1
2.	Two	1	0	1	2	18.2
3.	Three	0	1	2	3	27.3
4.	Fore or more	1	1	3	5	45.4
Total						100.0

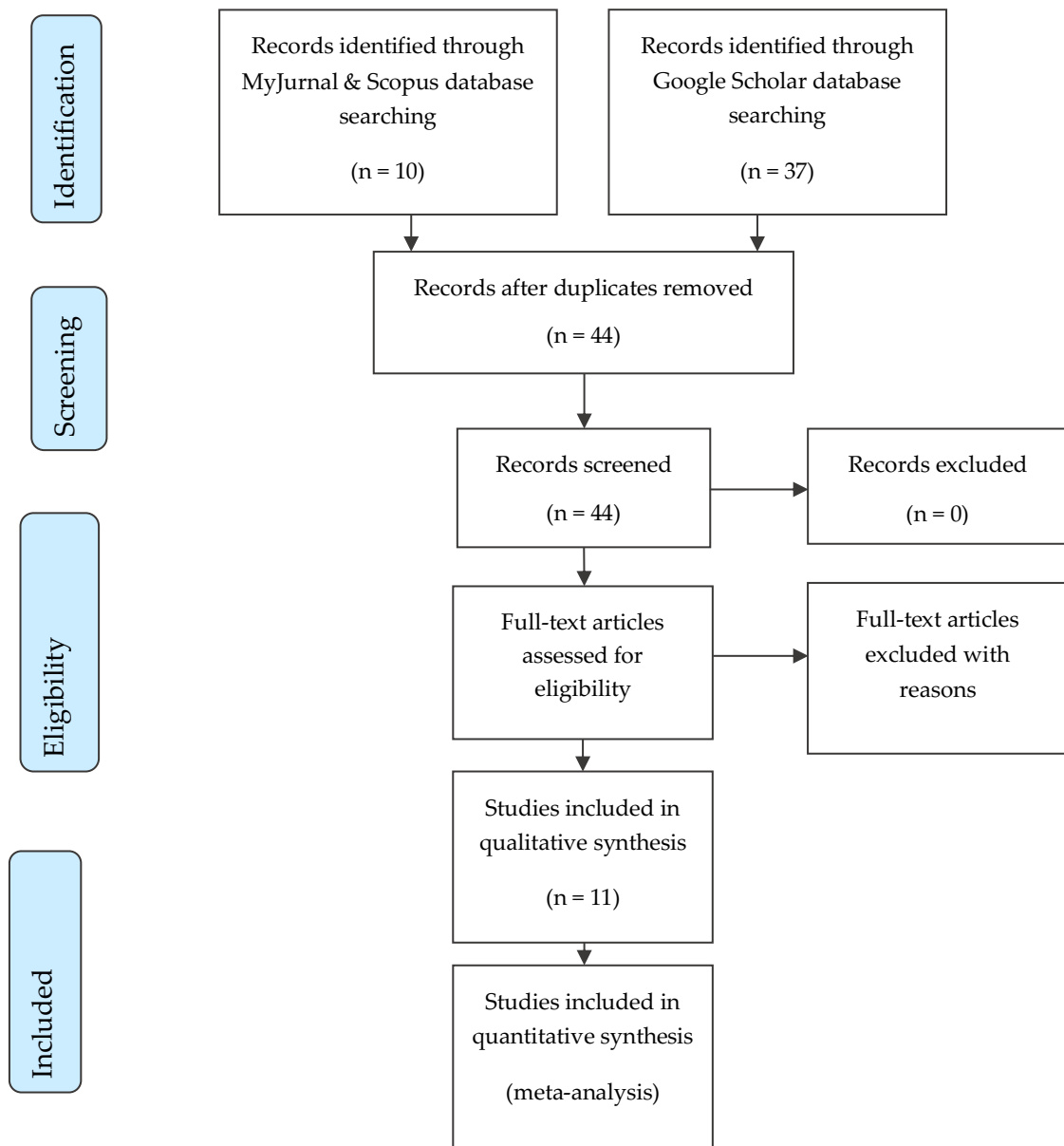


Figure 1. Adaptation of PRISMA 2020 Flow Chart (Page et al., 2021) for the Screening Process of Systematic Literature Review on Micro Takaful Financing Through Zakat and Waqf Funds

The year of publication for all journal articles analysed in this study shows that they have been produced in 10 years, from 2012 to 2021. However, no journal articles were recorded as literature for this study for four years in 2013, 2015, 2016 and 2017. Further, records show that there was one article published in 2012, 2014 and 2018, equivalent to 9.1% per year of the total literature in this study. Two papers were published in 2020, equal to 18.2%, while in 2019 and 2021, three articles, equivalent to 27.3% of the total literature published each year.

No.	Publication Year	Number of Publication			Total	Percentage (%)
		Scopus	MyJurnal	Google Scholar		
1.	2012	1	0	0	1	9.1
2.	2013	0	0	0	0	0
3.	2014	1	0	0	1	9.1
4.	2015	0	0	0	0	0
5.	2016	0	0	0	0	0
6.	2017	0	0	0	0	0
7.	2018	0	1	0	1	9.1
8.	2019	0	0	3	3	27.3
9.	2020	0	1	1	2	18.2
10.	2021	0	0	3	3	27.3
Total						100.0⁴

Table 5. Number of Journal Articles Published by the Year of Publication from the Search Results through Each Academic Database

DISCUSSION

Several issues and challenges for micro takaful financing through funds and zakat and waqf have been discussed in the literature, including the conditions of ownership (*al-tamlīk*) of zakat property, limitations of legal provisions, high overall operating costs and lack of knowledge and awareness among society. This section will discuss those challenges identified through the literature sources accepted in the study.

a. Shariah issues on the asnaf ownership of zakat property

The ownership (*al-tamlīk*) of zakat property to asnaf is a significant issue in the validity of micro takaful financing using the fund. This is because the condition of *al-tamlīk* on zakat property is a point of dispute among scholars. Discussions on this ownership issue have been the focus of literature such as (Ghani et al. (2018); Mikail et al. (2017); Thaidi et al., (2020). The majority view of scholars from the Hanafi, Syafi'i and Hanbali schools tends to state the obligation of *tamlīk* on zakat property by asserting that the letter '*lam*' in the word '*li al-fuqara*' in verse 60 of Surah al-Taubah means the ownership of the zakat property for the stated recipients (*asnaf*).

On the other hand, the opinion from the Maliki school says that '*lam*' in the word '*li al-fuqara*' did not indicate the meaning of *tamlīk* but explains the distribution of the eight categories of asnaf through the same verse (Al-Mahdawi, 2007). (Ghani et

⁴ The total of 100.0% here is taking the round up value of 9.090909090909091% for the percentage of the number of articles published in 2012, 2014 and 2018, 18.18181818181818% for 2020 and 27.27272727272727% for 2019 and 2021.

al. (2018) explore further the view of the Maliki school, which does not require *asnaf* to have property ownership. It also brings the thought of Al-Shawkani (2004), who does not require *tamlīk* for zakat property if needed.

(Mikail et al., 2017) discuss this issue by categorising three parties who contribute micro takaful directly for the benefit of *asnaf* by using zakat funds, namely zakat payers, governments or zakat recipients. For zakat recipients, no shariah issues arise because they already own the zakat property, which is used according to their wishes and needs. For zakat payers, the study chooses the views of most scholars who do not allow the matter. This is due to the benefits of micro takaful protection, which will only be given to *asnaf* if they meet the eligibility to obtain a claim. In contrast, the benefits of zakat must be received immediately.

Micro takaful contributions made by the government using zakat funds are allowed according to the decision of the Shariah Committee of Kuwait Finance House with the assessment that it does not cause delays in the provision of benefits as well as guarantee the welfare rights of *asnaf*. In addition, the decision showed that the distribution of zakat funds for micro takaful financing done by the government does not require *asnaf* ownership of the property.

b. Limitations of legal provisions

The management of zakat and waqf property in Malaysia is subject to the State Islamic Religious Council (SIRC) laws in each state based on the powers provided through the Federal Constitution (Abdul Ghani et al., 2021). In addition, SIRC is the sole trustee for waqf property, which gives the body full authority over the management of zakat and waqf property according to the administrative area of each state (Thaidi et al., 2019a). Accordingly, Abdul Ghani et al. (2021) stated that micro takaful financing through zakat funds could only be implemented after obtaining permission from SIRC. Today, SIRC permits individuals, companies/organisations, employers or institutions of higher education to distribute their zakat through zakat *wakalah* as implemented by the Zakat Collection Center of the Islamic Religious Council of the Federal Territories (PPZ-MAIWP). However, the study by Kamal et al. (2020) showed conflicting views among their interview informants in stating whether takaful companies have legal restrictions on accepting zakat *wakalah*. This is because no official law or fatwa stipulates the following; hence it invites confusion not only to the community but also to researchers and players of the takaful industry.

Accordingly, the significant legal issues in micro takaful financing using zakat funds can be seen through the absence of specific fatwas that allow its implementation (Abdul et al., 2019; Ghani et al., 2018; Mikail et al., 2017). Fatwa committees in each state in Malaysia play an important role in examining the content of micro takaful

financing through zakat funds, clarifying shariah issues that arise and providing shariah-compliant guidelines in its implementation procedures to the community and relevant parties. The absence of the source of power for the implementation will invite accusations and wrong views among the community when shariah issues that arise in micro takaful financing through zakat and waqf funds are not resolved with the issuance of a clear fatwa.

Legal provisions or fatwas are also needed to resolve delays in managing waqf funds due to SIRC's sole ownership of the fund (Thaidi, Salleh, et al., 2021). This makes the management of waqf today burdened with various needs but has limited human resources. For example, Thaidi, Nazarie, et al. (2021) stated that several cases of SIRC delay in granting permission to institutions, thus causing difficulties for such institutions to conduct promotional, collection, distribution and waqf development activities. Such a thing turns out to be to the detriment of all parties involved. Therefore, among the proposals put forward to launch the management of waqf funds in micro takaful financing is to allow waqf to appoint an independent and authoritative institution to manage the fund (Alias & Cizakca, 2014).

c. High operating cost

Lack of income for the B40 group is the main reason for developing micro takaful financing through zakat and waqf funds. However, the cost involved in making this effort a success is not only focused on financing the contributions of micro takaful participants but also related to the operation of the micro takaful company. Thaidi et al. (2019b) stated that micro takaful companies need considerable funds to expand the promotion of micro takaful schemes to the B40 group, who mostly live in rural areas. It is a necessary effort that needs to be made to maintain the viability of micro takaful companies in Malaysia. Among the actions to expand the reach and promotion of micro takaful products include product advertising, weekly meetings, censuses, and the organisation of B40 entrepreneurship and health-conscious support programs. In addition, the high cost of treatment and the increasing rate of medical inflation every year should also be considered costs to be borne in this financing (Thaidi, Salleh, et al., 2021).

In addition, micro takaful financing also needs to consider the financial risks that may occur in the financing model developed, such as credit risk, moral hazard and economic survival (Diniyya, 2019). Moral danger among borrowers in a loan financing model can also occur when they use the funds lent for purposes other than micro takaful. These risks will certainly cause losses to micro takaful companies and waqf institutions. The economic sustainability risk of micro takaful companies can be illustrated by the high management costs of micro takaful schemes and the low contribution rate charged to participants among the B40.

Therefore, further research needs to be done to identify the ability of zakat and waqf funds to finance the operating costs of this sizeable micro takaful. Literature such as Abdul Ghani et al. (2021) has stated the challenge of lack of zakat funds to finance micro takaful due to the rising cost of living and the increasing number of asnaf from year to year.

d. Lack of knowledge and awareness among the Muslim community of various waqf instruments

Literature such as Thaidi et al. (2019b) and Thaidi, Nazarie, et al. (2021) have focused their studies on identifying the challenges of micro takaful and waqf integration. The study's results found that the main challenge for this integration comes from the community's low understanding and awareness of the various waqf instruments. Today, the community still understands the practice of waqf in its limited scope, which is only related to immovable assets such as land, buildings and mosques. Even new waqf instruments, such as cash waqf, are still poorly understood by the community, so some still dispute that the implementation is invalid, according to the shariah. The purpose of waqf in the community is also seen to focus only on religious purposes, such as the construction of mosques and waqf cemeteries. It was reported that 80% of the land waqf property is for religious purposes (Nor & Mohammed, 2009). The phenomena cause the dumping of waqf lands that cannot be appropriately managed.

The community's tendency to implement specific waqf (*waqf khas*) compared to general waqf (*waqf 'am*) (Suhaimi & Rahman, 2017) also makes it challenging to manage waqf property when the property is only subject to certain benefits specified by the waqf. Therefore, studies propose that the temporary waqf (*al-waqf al-muaqqat*) element must be added to avoid numerous unmanageable waqf properties.

CONCLUSION AND RECOMMENDATION

In conclusion, this systematic literature review study through the PRISMA method found 47 academic documents through keyword searches from Scopus, MyJurnal and Google Scholar academic databases. From the number, a total of 11 journal articles were accepted as the literature of this study. After going through the discussion from literature sources, this study has identified the lack of publication of journal articles on micro takaful financing using zakat and waqf funds in Malaysia. Furthermore, the literature search results of this study were made over ten years, starting from 2012 to 2021. Therefore, this study suggests further research through the publication of journal articles that present appropriate solutions to the issues and challenges faced in implementing this funding strategy. It will also definitely contribute to developing

a micro takaful financing framework through zakat and waqf funds in Malaysia in the future.

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THE DUAL NATURE OF GOOD DEEDS: A COMPARATIVE STUDY OF MUSLIMS' THOUGHTS⁵

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Abstract

This article aims to highlight the insights of selected renowned Muslim scholars on the nature of good deeds. The article focuses on analysing spiritual insight of selected Muslim scholars towards the dual dimensions of good deeds, which is inner and outer or physical and spiritual. This article is library research which employs descriptive and analytical study. The article founds that these Muslim scholars affirms the existence of inner dimension of good deeds, and therefore, good deeds comprise of both inner and outer dimension. Both of these dimensions need to be observed accordingly. The balanced observance of these two dimensions of good deeds is critical in order to achieve its real purpose.

Keywords: *Good deeds, inner dimension, outer dimension, spirituality.*

INTRODUCTION

"Good deed" or "good work" is a generic phrase with a wide range of contexts, meanings, and applications. However, in an Islamic setting, good deeds are defined as actions that the Shari'ah commands, encourages, or praises. It is an act of goodness, beauty, virtue, or righteousness carried out in accordance with Shari'ah and done for Allah's pleasure and contentment (Mohd Rosmizi, 2014). All areas of activity, including those relating to religious rites and rituals (*'ibadah*), social activities (*mu'amalah*), and ethics, are included by the broad and all-encompassing definition of

⁵ Part of this article has been published in Mohd Rosmizi Abd Rahman, Mohamed Mihlar Abdul Muthaliff, Marina Munira Abdul Mutalib, Rezki Perdani Sawai, Roslizawati Mohd Ramly. (2012). Unveiling the Forgotten Aspect of Good Deeds: A Comparative Study of Muslims' Thoughts. *International Journal of Academic Research in Business and Social Sciences*, 12(9), 1850 – 1868.

a good deed (*akhlāq*). It also includes verbal communication, bodily movement, and even spirituality.

There are several Arabic terms which denote good deeds. They are *'amal salih* (pl. *a'mal salihat*), *birr*, *khayr* (pl. *khayrat*) etc. However, only the first term (*'amal salih*) which is more precise and refers to righteous or deeds, performed in accordance with the Shari'ah. The other two terms are rather general to refer to all that is good.

Most followers, especially laypeople, place more emphasis on the outward observance of good deeds which include religious observance and rituals as well as moral conduct. As a result, their rigid observance of their external requirements frequently comes before their spiritual component. To some extent, this strategy results in dogmatic, ritualistic, and legalistic interpretations of good deeds. Because of that, there were some Muslims renowned scholars came and made earnest efforts in their own ways to rediscover the inner dimension of religious observance. This is to bring about a return in Muslim societies to a more profound reflection upon the inner dimension of the spiritual life.

Among those most prominent scholars is al-Ghazali. He was among the first great thinkers to properly define the issue and provide comprehensive remedies, both in theory and in practise. Al-Ghazali was aware of a lack of spirituality and awareness of the inner dimension of good deeds. He lamented that the majority of followers merely cared about the outer dimension of good deeds, oblivious to the necessity to nourish their inner selves with spirituality (the soul). The majority of other renowned Muslim thinkers who studied Sufism such as al-Muhasibi, al-Raghib al-Isfahani, and Abu Talib al-Makki likewise emphasise the dual nature of good acts, and they all collectively offer Muslims different pieces of guidance on how to follow both the inner and outside components of good deeds appropriately. They contend that each good conduct has two aspects, namely an outside and an inner aspect. These two elements need to be combined and monitored appropriately.

METHODOLOGY OF THE STUDY

This article is theoretical in nature, and it involves library research. Thus, this article applies qualitative approach, employing descriptive and comparative methods. It begins by outlining the overall pertinent issue relating to good deeds. The perspectives of various prominent Muslim scholars are then compared and examined with regard to specific aspects of good deeds.

RESULTS AND DISCUSSION:

THE DUAL NATURE OF GOOD DEEDS FROM MUSLIM PERSPECTIVES

Imam al-Ghazali [Imam Abu Hamid Muhammad ibn Muhammad ibn Muhammad al-Ghazali al-Tusi (1058-1111 CE / 450-505 AH)], one of Muslim most prominent and influential scholars, can be considered as the one who seriously scrutinized, experienced and revealed the dual nature of good deeds.

Al-Ghazali has not only continually exhibited a favorable attitude toward the value of doing good deeds, but he also provides his own special and profound approaches to comprehending and carrying out good deeds, developed within his own spiritual framework.

According to al-Ghazali, there are two fundamental components to creation: the physical and the spiritual, the exterior and the interior, or the visible and the invisible (al-Ghazali, 1981: 68–84). Al-Ghazali asserts that good deeds likewise have two aspects, namely an outside and an inner dimension. The core of good deeds is found in their internal component (Quasem, 1974: 50). As a result, he places a heavy focus on the necessity of observing both the exterior and interior dimensions of good deeds in a balanced manner (Mohd Rosmizi et al., 2017).

Based on al-Ghazali's view of the nature of good deeds which consists of two dimensions, namely the outer and inner, the physical and spiritual, we will examine briefly some other Muslims prominent scholars on the nature of good deeds. This is to compare and confirm al-Ghazali's view on the issue as well as to emphasize its importance. Those selected scholar are al-Muhasibi, Abu Talib al-Makki, al-Raghib al-Isfahani. However, before we embark on analyzing the views of other prominent Muslims scholars, we will first examine briefly the views of Imam al-Ghazali on the nature of good deeds.

GOOD DEEDS ACCORDING TO IMAM AL-GHAZALI

Al-Ghazali claimed that performing good deeds is one of the paths to journeying Allah (God). Good deeds should be able to strengthen the relationship between man and Allah since they are a reflection of one's knowledge, awe, and love of Allah. Al-Ghazali consider good deeds are among the most crucial items for a pilgrim or traveller on the way of Allah since they may aid him in avoiding worldly avarice and lead to spiritual success and eternal bliss (al-Ghazali, 1986; Mohd Rosmizi, 2019).

Al-Ghazali asserts that there are two primary facets to creation: the physical and the spiritual, the exterior and the interior, or the visible and invisible (Al-Ghazali, 1981). According to him, a person is made up of two parts: a physical body (*zahir*) and an interior (*batin*) and spiritual component known as the heart or soul. The physical body which is the outer dimension is also referred to as *surah* (shape). Whereas the inner dimensions is referred to as *ruh* (spirit) or *hayah* (life). Both of these aspects have their own different nature and "world". The *zahir* or physical body belong to the phenomenal or material world which known as '*alam mulk* or '*alam al-shahadah*. The

batin or interior part belong to the spiritual world or the realm of the divine world which is known as *'alam al-malakut* (Al-Ghazali, 1986; Al-Ghazali, 1967; Al-Ghazali, 1953; Al-Ghazali, 2010; Al-Ghazali, 2003; Al-Ghazali, 2001; Whittingham, 2011). Al-Ghazali stresses that the heart is the king of human body, and it is the source of all actions. Therefore, al-Ghazali places great emphasis on explaining the wonder of the heart, its disease and solution. Diagram 1 show the categorization of two dimension of good deeds according to al-Ghazali.

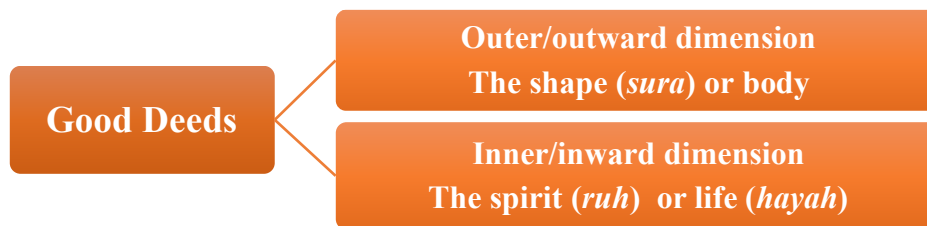


Diagram 1: The Dual Nature/Dimension of Good Deeds according to al-Ghazali

Al-Ghazali reminds us that the inner dimension is the "kernel" of good deeds because without it, good deeds would only seem to be empty gestures devoid of any lasting worth. Good deeds carried out without consideration for an inner dimension may therefore be viewed as imperfect or even invalid. In fact, there is a chance that good deeds carried out improperly will ultimately be viewed as bad deeds or sins, which are particularly destructive to the soul (al-Ghazali, 1986).

Therefore, al-Ghazali emphasizes the significance of maintaining a balance between the inner and outer components of good deeds. As a result, preserving balance between the inner and outer dimensions is the only way for good deeds to have the appropriate impact on the soul and serve their intended purpose (Quasem, 1978). The balance observance of both dimensions of good deeds must be consistently maintained at all stages of life and by all classes of believers (Quasem, 1974).

GOOD DEEDS ACCORDING TO AL-MUHASIBI

Al-Harith ibn Asad al-Muhasibi (243/857) which is called al-Muhasibi was born in Basra and died in Baghdad. He was known as a great Sufi, however, little is known about him (Mohamed, 2006). Al-Muhasibi attached great emphasis on *akhlak* (ethics and morality) and spirituality. He does not only advice the lay Muslims, but he also give guidance to advance Sufis (Al-Muhasibi, 1993; Filiz, 2006). For instance, he develops the principles of Sufi morality in his *Sharh al-Ma'rifah wa Badhl al-Nasihah*. Imam al-Ghazali is among those who benefited and influenced by the spiritual insight of al-Muhasibi.

Al-Muhasibi asserts that good deeds have a dual nature and that both should be carried out in accordance with their respective natures. This view affirms the view

of al-Ghazali. Al-Muhasibi believes that good deeds should be carried out for the sake of God and again this view is in line with the view of al-Ghazali. In his *Sharh al-Ma'rifah wa Badhl al-Nasihah*, al-Muhasibi emphasises that performing good works or praying without having *al-Ma'rifah* (essential knowledge/gnosis) causes one to become cut off from God and harden their hearts (Al-Muhasibi, 1993; Filiz, 2006).

Al-Muhasibi also offers an interesting discussion on the enigma of human behaviour. He asserts that every human organ, particularly the heart, is capable of amazing acts and deeds. The acts and deeds of the heart are beyond and more valuable than the physical limbs. It is the heart which is considered as the real essence, and the source of all actions. Because of that, he asserts that God looked more favourably upon the heart and its activities rather than the physical organs and their deeds (Al-Muhasibi, 1993; Filiz, 2006).

GOOD DEEDS ACCORDING TO ABU TALIB AL-MAKKI

Abu Talib Muhammad Ibn Ali Atiyya al-Harithi al-A'jami al-Makki (996) is another prominent Muslim scholars which came from Persian. Like al-Muhasibi, al-Ghazali also benefited and influenced by the insights of al-Makki. *Qut al-Qulub* (Nourishment of the Heart) which is the wonderful work of al-Makki is filled with spiritual insight which reveals some aspects of inner dimensions of good deeds.

Al-Makki offer deed analysis of the heart and inner dimension in his *Qut al-Qulub*. Like al-Muhasibi and al-Ghazali, al-Makki also stress on issue regarding *ma'rifah* (essential knowledge/gnosis), which according to him is only attainable through balance observance of the inner and outer devotion to Allah. This indicates that al-Makki attach great emphasis on spiritual aspects of good deeds.

Another interesting point is that al-Makki makes a close connection between good deeds and the stations (*maqamat*) and the states (*ahwal*). Each of these phases possesses enormous virtues that raise the spiritual consciousness of man. This also shows that al-Makki relate the physical world with the spiritual world as al-Ghazali did. He breathes spirituality into different kinds of good deeds and akhlak (al-Makki, 1997; Wan Mohd Azam, 1991). Al-Makki also stress on the need of *tazkiyatun nafs* (purification of conscience). In this case, *tawbah* (repentance) is an important acts towards that goal. Knowing oneself and God, according to al-Makki, is crucial to a Muslim's daily life. It denotes the necessity of self-awareness before to beginning the road to Allah SWT (salik). The concept of taubah is of two levels . Diagram 2 shows two levels of *tawbah* according to al-Makki

1. The first is when a person repents and promises not to repeat his sins, grieves for the sins committed and continues (istiqamah) in obeying His commandments and avoiding anything He forbids.



2. In this level, one has to make sure that he is aware of the sin and to make repentance. He has to promote good life and try as much as possible to avoid making the same mistakes. It is a practical deed that Abu Talib al-Makki urges man to recompensate all the negative with good behaviour, intention and acts. It is how he should behave in showing his grief towards the mistakes. (al-Makki, 1997, p.250)

Diagram 2: Two Levels of *Tawbah* by Abu Talib al-Makki (Source: Dini Farhana Baharuddin, et.al, 2018, p.91)

GOOD DEEDS ACCORDING TO AL-ISFAHANI

Abul Qasim al-Husayn ibn Muhammad ibn al-Mufaddal al-Raghib al- Isfahani (1108) is a Syafi'ites great scholar and Sufi. In the Muslim world, al-Isfahani is primarily recognised for his Quranic lexicon, *Mufradat Alfaz al-Quran* (Mohamed, 1995).

According to Al-Isfahani, good deeds can be divided into two categories: voluntary deeds by enslaving oneself and worship that has been declared to be ordered by Allah SWT (al-Isfahani, 1961). This shows that good deeds has dual nature. Maintaining that faith consists of both words and deeds, al-Isfahani asserts that complete faith cannot exist if a person is an adulterer or a thief. Al-Isfahani combines faith and *akhlak*, arguing that ethics and faith go hand in hand; while faith is a matter of the heart, it is only perfected by good deeds (Mohamed, 2006). As a result, one must incorporate good deeds into their worship in order to develop their faith. That implies that a person's level of faith will be determined by their deeds. This indicates that good deeds also has important role in one's faith. Therefore, balance observance of the dual nature of good deeds is of paramount important.

Al-Isfahani relates the prescribed acts of worship (*'ibadah*) with noble qualities (*makarim*). The noble qualities and the prescribed acts of worship are both included in his ethical book, *al-Dhari'ah ila Makarim al-Shari'ah* (The Means to the Noble Qualities of Law), which is also known as *Ahkam al-Shari'ah* (The Rules of Law). Al-Isfahani holds that noble qualities of the Law are supplementary to worship which is obligatory, and that they are unacceptable in the absence of acts of worship. However, he also holds that all types of worship are part of noble qualities. Some of the noble qualities are wisdom, justice, forbearance, beneficence, and graciousness, which the aim of all of these noble qualities is to attain paradise and be close to God (Mohamed, 1995)

BRIEF COMPARISON

Based on the above brief discussion, we can conclude that al-Ghazali stresses that good deeds comprise of two dimensions, namely, the outer which is also the body or the physical dimension and the inner, which is the spiritual or life or the real essence. He strongly advises Muslims to observe both dimensions when performing any good deeds, whether religious devotional act or normal action.

The discussion above also suggests that al-Muhasibi affirms the existence of dual nature of good deeds. He places equal emphasis on both dimensions of good deeds. He establishes a close relationship between the outward and interior dimensions as well as between man and God. He does not only provide the standard explanation of good deeds found in typical *fiqh* works, which mostly focus on the outer dimension. This approach is consistent with that of al-Ghazali.

Like other scholars discussed above, al-Makki affirms the existence of dual nature of good deeds, namely the outer and inner or the physical and spiritual dimensions. Like al-Ghazali, he urges Muslims to learn and observe both of them accordingly. It is only through a balanced observance of both dimensions of good deeds that one can feel the sweetness of performing good deeds.

Al-Ishafani also agrees with the other scholars mentioned above that good deeds have both an inner and an exterior, or physical and spiritual, aspect. Like al-Ghazali, he exhorts Muslims to study and observed both of them accordingly. He argues that one can only experience the delight of doing good things by carefully observing each of their aspects.

CONCLUSION

This article discovered that the selected prominent Muslim scholars affirm the dual nature of good deeds. This means that they all agree good deeds comprise of both an inner and an outer dimension. They spread the idea that each good deed has two aspects, namely the inner and outer, or the outward and interior, the physical and the spiritual dimensions, by using their own methods. These two elements need to be combined and observed appropriately. Thus, they propose the idea that good deeds can only fulfil their objectives and promote spiritual development through the balanced observance of outer and inner dimensions.

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A CONCEPTUAL FRAMEWORK OF A SOCIAL ENTREPRENEURSHIP MODEL IN CROWDFUNDING PLATFORM TOWARDS COMMUNITIES

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Abstract

This study attempts to develop a practical model of social entrepreneurship in crowdfunding platforms toward communities. Crowdfunding is a way to raise money from the crowd in order to achieve project goals. Three important elements involves: crowd, project owner and platform. Meanwhile, social entrepreneurship is all about recognizing the social problems and achieving social change by employing entrepreneurial principles, processes and operations. As pandemic of COVID-19 has shown the struggle of people to survive and the challenges caused by the pandemic. Recent studies found that social entrepreneurs can apply as a response to a major crisis in the local community. In other words, social entrepreneurs can become an entity that can help the community to better prepare during crisis. This study proposes the framework that reconceptualizing the concept of the social entrepreneurship in crowdfunding platform toward communities during pandemic. The respondents consist of project owner that do a social project and the funder. This study adopts a mixed-methods approach that is based on interviews, content analysis and surveys by investigating the components of the social entrepreneurship model in crowdfunding platform perspective. The outcome of this study may contribute to developing a model that will enhance the sustainability of social projects among social entrepreneurship

Keywords: *Entrepreneurship, Innovation, Crowdfunding Project, Platform, Communities.*

INTRODUCTION

Social entrepreneurs do amazing work at the intersection of commercial and social value creation, which is often highlighted in communication with various stakeholders. However, in the context of crowdfunding, where the attention less due to limited audience, individual donations are small, social entrepreneurs may want to keep things very simple. Rather than trying to make the case for both economic and social value creation in campaigns, social entrepreneurs may better capture the attention and money of the funding crowd by focusing on the social change that they create.

During the pandemic, people instinct is often to help people by donating money. It can be proven that some of crowdfunding project has been successfully

funded to support COVID-19 related causes. For example; Kitajaga kita campaign that has been done by Global Sadaqah received a great support by crowd and raised almost RM100 000 over two weeks launched. With the funds, it developed and launched new features to allow the direct purchase and delivery of essential goods and food to beneficiaries and multiple enhancements to improve user privacy and security. As COVID-19 has left many people going through those various hardships such as business being forced to shut down and many people losing their jobs.

However, simultaneously, those some of project that trying to fund causes of the COVID-19 obviously less received attention from the crowd. For example: the project of Bakul of Ummah by KOJUSA failed too fully funded. The goal target was RM20 000 but only received RM6 000 within 2 months. So, how can social entrepreneurs improve their chances in attracting crowd to fund their project in crowdfunding platform? To discuss this, this study drawn from previous research that highlights that the different factors that may influence success factors of project campaign. Parhankangas and Renko (2017) observe videos of social and commercial entrepreneurs focusing on how their Kickstarter campaign text and communicative aspects contribute to the crowd's response (campaign success). The study identified interesting trends in the linguistic styles (i.e. how something is said) that lead to success. For social entrepreneurs, linguistic styles characterized by concreteness (contextualized and detailed representations of objects), preciseness, and interactivity (increased use of questions) are well-received by the crowd, boosting campaign success rates. Psychological distancing, where the social entrepreneur distances or removes himself or herself from the present circumstances or the topic being discussed, however, hinders fundraising efforts. In addition to social campaigns on Kickstarter, these results were also repeated in campaign data from Start Some Good, a social crowdfunding platform. Simultaneously, however, these same linguistic styles hardly matter for commercial campaigns on Kickstarter.

Another studies, Nazarie and Russell, (2021) found that linguistic style and gender match between project owner and crowd positively impact to fund intention. Moss et al (2019) explore the relationship between the content of the campaign text and the crowd's response in terms of funding success. The study indicates that the balance between economic and social arguments when appealing to donors actually backfires campaigns with such hybrid communication strategies are less likely to be funded when compared with campaigns that solely focus on describing the economic or social benefits.

Hence, the research objective of this study are:

1. What is the current business model of social entrepreneurship in crowdfunding platforms?

How is the implementation method of social entrepreneurship model in crowdfunding platforms?

LITERATURE REVIEW

What is Crowdfunding?

The advancement of the Internet and technology has led to the growth of crowdfunding (CF). The evolution of technology allows users to connect with each other all over the world, without barriers. CF as a funding method has grown quickly and virally through the Internet. CF refers to a new Internet-based method of funding, in which individuals solicit contributions for projects on specialised CF platforms (Wheat et al., 2013). These platforms, employed by creative founders, allow individuals to raise funds for projects from the general public.

Historically, CF evolved after the financial crisis in 2008, with the emergence of social media and technology. CF is derived from the broader concept of crowdsourcing – the outsourcing of problem-solving tasks to a distributed network of individuals (Howe, 2006). The basic idea of CF is that instead of obtaining capital from investors or banks, entrepreneurs (project founders) can now fund their creativity from a large number of people, referred to as a ‘crowd’, by using platforms on the Internet where each contributor provides a small amount of money (Belleflamme and Lambert, 2014). The biggest obstacle faced by a new entrepreneur is obtaining sufficient capital resources to start a business. This obstacle includes aspects such as an absence of collateral, difficulty in devising an impressive proposal, and a lack of business experience (Agrawal et al., 2015). The implementation of CF platforms provides an opportunity for new entrepreneurs to raise a sufficient amount of capital to start their businesses. In other words, the entrepreneur becomes more independent in seeking funding, as they do not depend on venture capitalists or banks.

CF as a Mechanism of Transaction

Four models of CF have been recognised: donation-based, reward-based, lending-based and equity-based CF (Mollick, 2014). All these models rely on the crowd as a donor (investor) to obtain capital, with the crowd providing a capital injection to a project in exchange for tangible or intangible returns from the project founder. Mollick (2014) suggested that the differences between these models depend on the goals of project founders and supporters. Lending-and equity-based models replicate the traditional mechanism of investment. The lending-based models link project founders and donors, as in the relationship between debtor and lender. Meanwhile, equity-based models use an entrepreneur and investor relationship, as in traditional venture capital. In the donation-based model, the founders are social entrepreneurs, whilst

donors serve as philanthropists. Finally, for reward-based models, the entrepreneur is known as a 'project founder', and project supporters represent early customers, rather than investors.

The donation-based CF model is relatively well aligned with the social entrepreneurship model (Lehner, 2013). The other three models (reward-, lending- and equity-based CF) align closely with traditional venture capital, as they gather risk capital for entrepreneurial activities (Mollick, 2013). These three models feature a monetary exchange and a tangible product. This creates contractual relationships between entrepreneurs and individuals, comparable to those in traditional venture capital (Agrawal et al., 2011). Frydrych et al., (2014) argue that CF also provides an ecosystem facilitating broader resource exchange between stakeholders. The collective development of a business plan or idea exchange cannot commonly be found in traditional venture capital, where, through the CF platform, participants can share opinions and co-create the business plan. Moreover, participants can use these ecosystems to increase market awareness and receive customer feedback.

Basically, reward-based and equity-based CF have distinct similarities in two aspects: 1) it is assumed that the project founder must raise the amount of capital to launch the project, which means that the capital is set without loss of generality, to zero regardless of the form of CF chosen. This means that the project founder is already clear about the project and 2) it is assumed that the project founder faces the same crowd of backers or investors in the two forms of CF: there is no priority preference for participating in the project. As the project can be 'frozen' due to having insufficient funds or capital to run the project, the project founder can learn about the crowd demand. CF may be implicated as a product pre-ordering model that enables price discrimination among early adopters (Belleflamme and Lambert, 2014). Price discrimination refers to a pricing strategy that charges customers different prices for the same product or service. For instance, in reward-based CF, projects commonly have pre-order mechanisms integrated into the reward structure (e.g. after contributing USD 10 to a music project, the backer will receive the recorded music album once the project is successful). The mechanism also presents a zero-capital management technique to fuel organic growth in the early stages of business (Vanacker and Manigart, 2010).

Social Entrepreneur

Social enterprises can play a critical role in mitigating the negative effects of major crises if these ventures are able to attract enough funding for their activities. This study aims to integrate three elements (social project, crowd, and crowdfunding platforms)

to clarify key strategies of a social entrepreneur to help communities. Social entrepreneurs play an important role in order to compensate the incapacity of state-led institutions by offering support for the recovery of communities (Farny et al., 2019). As to pandemic of COVID-19 has shown the struggle of people to survive and the challenges caused by the pandemic. Recent studies found that social entrepreneurs can apply as a response to a major crisis in the local community. Anchored reflectiveness, situated experience, breaking through and reaching out as a key resilience strategy in pandemic situations (Muñoz et al., 2019). It means that social entrepreneurs can become an entity that can help community to better prepare during crisis.

A social entrepreneur is a person who is trying to tackle society's most pressing problems and attempt to drive social innovation. Some people argue that social entrepreneur is similar to charity but it is different. Charity reflects the benefactor's compassion for humankind and is measured in terms of the generosity of donations to the less fortunate, social entrepreneurship reflects more than the good intentions of its practitioners, who are not merely driven by compassion but are also compelled by a desire for social change. In other words, while charity uses donor funds to buy food to ease the poor's hunger, albeit only temporarily, social entrepreneurship uses its funds to make a lasting social impact, creating instructional programs that teach the poor how to grow their own food so that they can take care of themselves in the long run. In a world of scarce resources, it is no longer enough to simply donate out of good intentions. Not to be confused with charity or altruism (Kroeger & Weber, 2014), this consists of creating a business model, based on the implementation of an innovative and creative solution, and motivated by a desire to help others and implement positive social change. The social entrepreneur, therefore, aims to provide an effective and efficient response in order to create financial, social and environmental wealth (Zahra & Wright, 2016), as a starting point for the creation and strengthening of a consolidated and more equitable social and economic order (Hilliard et al., 2014).

Social enterprise model

Social enterprises apply business solutions to social problems. The ultimate goal is to achieve sustainability by enabling non-profits to support themselves financially in innovative ways instead of relying solely on grants and donations. Since there are no shareholders in a non-profit organization, the profits from the related social enterprise are completely re-invested in the work of the organization.

The emergence of revenue-generating activities for non-profits has created a new operating model where business principles, market characteristics and values (competition, diversification, entrepreneurship, innovation, and a focus on the bottom line) co-exist and work with traditional public sector values like responsiveness to

community and serving the public interest. Essential to the success of a social enterprise is an effective business model.

Two key elements in the social enterprise model:

1. an operating strategy that includes internal organizational structure and external partnerships that are crucial for creating the organization's intended impact; and,
2. a resource strategy that defines where and on what terms the organization will acquire the resources (financial and human) it needs to do its work.

The business model for a social enterprise is the medium that the social entrepreneur converts inputs into outcomes; the generation of both social value (measurable impact) and economic value (revenue). The propose framework for this study is stated in Figure 1.1:

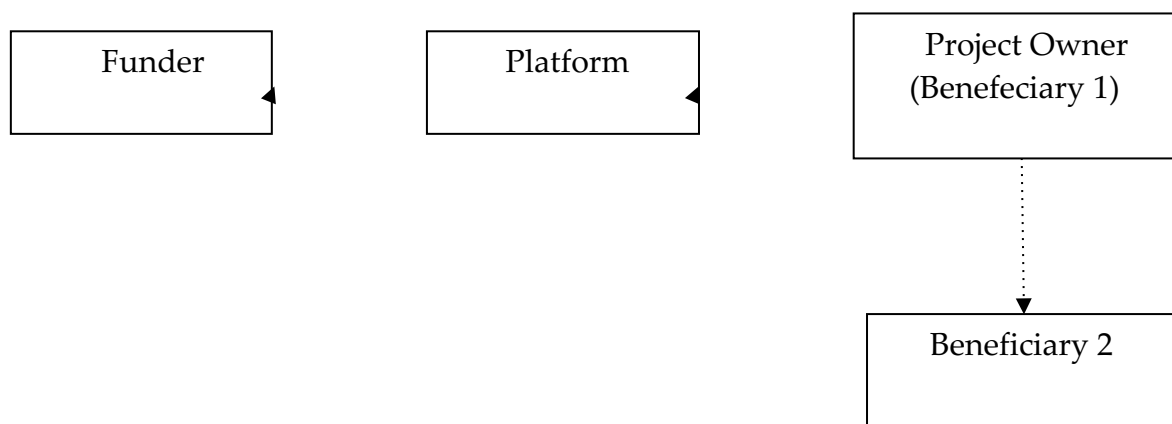


Figure 1.1: Conceptual Model of Social entrepreneurship in Crowdfunding Platform

METHODOLOGY

This research proposes the use of qualitative and quantitative methods in acquiring data and information through structured one-to-one interviews, content analysis and surveys. The study will utilize the existing literature documented in the form of government documents, reports, books and journal articles for critical analysis. This study also will rely on the primary sources, Quran and Hadith that serve as a guideline in building the sustainable model for social entrepreneurship. Furthermore, a survey on the elements of social entrepreneurship will be conducted on social project owners and crowds. A structured interview will be conducted on the social entrepreneur that has experience in doing social projects on crowdfunding platform.

CONCLUSION

Eventhough crowdfunding is a choice for entrepreneur to get the source of capital, however still little known used by social entrepreneurs due to crowdfunding still a new phenomenon. According to Bergamini (2017) the main reasons why people reluctant to use crowdfunding platform due to lack of project information in the crowdfunding project and impact to people's trust (Nazarie and Williams, 2021).

Crowdfunding platform plays an important role in supporting immediate financing of social enterprises especially during COVID19 crisis (Renko et al 2019). For example; the project of "KitaBantuKita" which launched by Kitafund platform raised RM279,084 as October 2020. Therefore, social enterprise crowdfunding is and will be an crucial tools in moving us towards a more sustainable post-pandemic future.

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THE ROLE OF ZAKAT IN INCREASING “MICRO, SMALL AND MEDIUM ENTERPRISES” (MSMEs) IN INDONESIA AFTER THE COVID-19 PANDEMIC

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Abstract

This study aims to examine the potential of zakat as a solution to increase “Micro, Small and Medium Enterprises” (MSMEs) that are affected by the long-term COVID-19 pandemic. Based on the results of the study, it was concluded that zakat is a “mahdhah” worship that has been arranged by Allah and the Apostle for its implementation. Therefore, the use of zakat funds to increase MSMEs must be in accordance with the provisions of the Shari’a. This study will use a descriptive-qualitative methodology, namely the use of qualitative data and described descriptively. In connection with this research, it aims to describe the role of zakat in improving the community’s economy both in theory and practice that develops in people’s social life objectively, then describes the sharia view regarding the role of zakat in social life. One of the efforts to encourage the increase of MSMEs, especially after the Covid-19 pandemic. Keywords: Zakat, UMKM, Pandemic, Covid-19, Economy.

Keyword: Zakat, MSME, Pandemic, Covid19, Economy

INTRODUCTION

The economic sector is one of the sectors affected by the Covid-19 pandemic, in addition to the education sector. This impact is not only felt by the Indonesian people, but also by the global community. An example is China, which is a country with rapid economic growth during the Covid-19 pandemic, its economic growth slumped from 6.1% to 3.8%. If the situation continues to deteriorate, it is possible to become 0.1%. South Korea also experienced an economic impact, originally projected to grow in the first quarter of 2.1%, a decline of about 0.4 percentage points. The economic growth of Thailand and Taiwan is also estimated to experience the lowest economic growth in almost half a decade, reaching 0.2% and 1.3% in the current quarter. Meanwhile, in 2020, the Director of the World Bank predicts that the Indonesian economy is expected to weaken below 5%. (Yamali, 2020).

In addition to the reduced purchasing power of the people, the government's policy of implementing social restrictions (social distancing) to suppress the transmission of Covid-19 has reduced economic activity (Iskandar. 2020). The impact on the economic sector during the COVID-19 pandemic in Indonesia, among others, the occurrence of

massive layoffs (the data obtained where 1.5 million workers were laid off and affected by layoffs of which 90% of workers were laid off and 10 workers were laid off amount 10 percent), the occurrence of a decline in PMI Manufacturing Indonesia reached 45.3% in March 2020, a decline in imports of 3.7 percent in the first quarter, the occurrence of inflation which has reached 2.96% percent year-on-year (YoY) which has been contributed from the price of gold and food commodities in March 2020, the occurrence of flight cancellations which resulted in a decrease in revenue in the sector. The perceived loss reached Rp. 207 billion. As many as 12,703 flights were canceled at 15 airports in January-March 2020, there was a decrease in occupancy at 6000 hotels up to 50%. This has the potential to result in a loss of tourism foreign exchange (Hanoatubun, 2020). Likewise, the aspect of tourism in Indonesia which has experienced a significant decline due to the spread of Covid-19 (Priyanto, 2020).

The Covid-19 pandemic has also had an impact on sector of MSMEs, especially in the retail sector which is not a basic need of people's lives, such as clothing, household appliances, stationery. Such conditions make the circulation of money in the community not smooth, so that economic growth is disrupted (Jannah, 2019). This is because MSMEs are businesses that have a high enough role, especially in Indonesia. With the large number of MSMEs, there will be more job opportunities for the unemployed. In addition, MSMEs can also be used as a source of income, especially in rural areas and low-income households (Nalini, 2021).

Data from the Indonesian Ministry of Cooperatives and Small and Medium Enterprises in 2018 shows the number of businesses for MSMEs units is 99.9% of the total business units or 62.9 million units. MSMEs absorb 97% of the total employment, 89% of which are in the micro sector, and contribute 60% of gross domestic product (Pratiwi, 2020). Therefore, when MSMEs experience sluggishness due to the Covid-19 pandemic, it has a significant impact on Indonesia's economic growth, what is clearly visible is the occurrence of layoffs everywhere.

The economic downturn due to the Covid-19 pandemic needs to find a solution. One alternative solution is optimizing the use of zakat funds for productive businesses as an effort to improve the community's economy that is systematic. This is because the essence of zakat is the circulation of money from top to bottom and up again, in accordance with the basic principles of Islamic economics, namely that assets do not revolve only in one hand or in one group (Effendi, 2007). The problem that will be examined in this research is the extent to which the role of zakat to improve the community's economy. What is the role of zakat to stimulate the increase of MSMEs during the Covid-19 pandemic? How to review the *shari'a* in this regard, considering that

individual MSMEs actors have the potential not to be included in the *mustahiq* zakat category.

RESEARCH METHODS

This study will use a descriptive-qualitative methodology, namely the use of qualitative data and described descriptively. In connection with this research, it means to describe the role of zakat in improving the community's economy both in theory and practice that develops in the social life of the community objectively, next is to describe the views of sharia relating to the role of zakat to stimulate the improvement of MSMEs, especially during the Covid-19 pandemic.

RESULTS AND DICUSSIONS

1. Zakat

a. Definition of Zakat

Zakat in terms of language comes from the word *zakaa / zakkaa* which means holy / purifying. Meanwhile, in terminology, zakat means issuing several assets after the conditions are met to certain groups of people determined by the Shari'a (Qardhawi, 1996). Zakat is a very fundamental Islamic teaching and one of the pillars of Islam, therefore the command of zakat is very clear in the Qur'an and the hadith of the Prophet. The word zakat in the Koran is repeated 82 (eighty-two) times and is always juxtaposed with the prayer command (Anshori. 2015). This shows the very high position of zakat in Islamic teachings. Among the verses related to the command of zakat are: "*And establish prayer, pay zakat, and bow with those who bow.*" (QS. Al-Baqarah:43)

This verse is an order for Jews to embrace Islam and then pray as described by the Prophet Muhammad and instructs them to pay zakat and pray in congregation (Asyqar, 2003). This means that every Muslim is required to pay zakat from the assets they have when they meet the conditions.

The command of zakat is emphasized by an order to the Prophet to take zakat assets from Muslims who have entered the category of obligatory zakat. Allah said: "*Take zakat from some of their wealth, with that zakat you cleanse yourself and purify them and pray for them. Verily, your prayer (becomes) peace of mind for them, and Allah is All-Hearing, All-Knowing.*" (QS. At-Taubah: 103) This verse is the basis for the establishment of amil zakat institutions that manage zakat funds from collection to distribution, where their position is as an extension of the role of leaders or the

government after getting in the management of zakat funds after obtaining permission from them.

b. The Valid Requirements of Zakat

There are several conditions that must be met in zakat.

- 1) Regarding the person, the conditions that must be met are:
 - a) Muslim, this means that people who are not Muslim are not obliged to pay zakat (Tuwaijiri, 2009). This is based on the word of Allah: "And there is nothing that prevents them from being accepted from them their livelihoods except because they disbelieve in Allah and His Messenger and they do not pray, but lazily and do not (also) spend their (wealth) but with reluctance" (Surah at-Taubah: 54).
 - b) Independence, meaning that there is no obligation of zakat for slaves (Tuwaijiri, 2009)
 - c) Baligh and 'aql. This is the opinion of Abu Hanifah, while the opinion of most *'ulama*, both are not conditions for zakat (Hawa, 1994).
- 2) Regarding the assets that must be spent on zakat
 - a) Including the types of assets that must be issued for zakat and have reached the minimum limit or *nishab*.
 - b) Has reached haul or one year since the property has reached the *nishab* (Salim, 2003)

In addition to the two conditions above, there are several conditions that must be met about assets that must be issued for zakat, namely:

- a) The physical property is fully owned and held by the obligatory zakat.
- b) The wealth grows, which is because the purpose of zakat is to help the poor, so that because the wealth does not grow, rich people become poor because their wealth does not develop.
- c) The property is the amount after deducting the necessities of life (al-Kuwaitiyyah, 1427 H).

c. Types of Zakat

Broadly speaking, zakat in Islam is divided into two, namely *zakat fitri* and *zakat mal* (wealth). The zakat mal consists of zakat on gold, silver, and means of exchange (money), zakat *'urudh tijarah* (trade commodities, zakat, agriculture, zakat on livestock, and zakat *rikaz* or found goods.

- 1) *Zakat Fitri*: zakat paid by a Muslim before Eid al-Fitr. The zakat is removed from staple food (or its equivalent) of 2.5 kg (Ardianis, 2018).

- 2) Zakat on gold, silver, and currency: zakat issued from one's property in the form of gold, silver, and a medium of exchange (money). The *nishab* of gold is 20 dirhams or the equivalent of 85 grams, while the zakat of silver is 200 dirhams or the equivalent of 595 grams. The *nishab* of savings is equal to the *nishab* of gold or silver. The level of zakat that must be issued if it has reached the *nishab* and haul is 2.5% of the total property (Riyati, 2018).
- 3) Zakat *Urud Tijarah*: zakat which is taken from goods that are prepared for sale. This is based on the word of Allah QS. al-Baqarah: 267): "O you who believe, spend (in the way of Allah) part of the results of your good efforts and part of what We remove from the earth for you". According to Muhahid, the meaning of "the results of your efforts" in the verse is from trade (Ibnu Katsir, 2005). The hadith that forms the basis for this is as narrated by Samurah bin Jundub who said: "The Messenger of Allah ordered us to issue zakat from what we prepared to trade" (Abu Dawud, 2009). Based on this hadith, trade zakat is property that must be removed from goods prepared for trade plus profits minus company debt and operational costs. The zakat is issued after the haul since the business started. The *nishab* for trade zakat is equal to the gold and silver *nishab*, while the amount issued is 2.5% (Susanti, 2020).
- 4) Zakat of Agriculture: That is zakat taken from agricultural products when it has reached the *nishab*. The *nishab* of agricultural zakat is if it has entered 5 (five wasaq) or 520 kg of rice. Scholars have different opinions regarding the types of agricultural products that must be issued zakat. Some argue that only staple crops such as rice, corn, and wheat, while some of them argue that all crops must be tithe when they reach the *nishab*. Meanwhile, the amount that must be spent is 10% if it is managed at no cost, and 5% if it requires a fee (Nopiardo, 2018).
- 5) Zakat of Livestock: zakat issued from livestock business when it has reached the *nishab*. The types of animals that must be issued zakat are cows, goats, and camels (Dudi, 2018).

Binatang Ternak	Nisab	Zakatnya	
		Bilangan Dan Jenis Zakat	Umurnya
Unta	5-9 ekor	1 ekor kambing biasa	2 tahun lebih
		1 ekor kambing domba	1 tahun lebih
	10-14 ekor	2 ekor kambing biasa	2 tahun lebih
		2 ekor kambing domba	1 tahun lebih
	15-19 ekor	3 ekor kambing biasa	2 tahun lebih
		3 ekor kambing domba	1 tahun lebih
	20-24 ekor	4 ekor kambing biasa	2 tahun lebih
		4 ekor kambing domba	1 tahun lebih
	25-35 ekor	1 ekor anak unta	1 tahun lebih
	36-45 ekor	1 ekor anak unta	2 tahun lebih
	46-60 ekor	1 ekor anak unta	3 tahun lebih
	61-75 ekor	1 ekor anak unta	4 tahun lebih
76-90 ekor	2 ekor anak unta	2 tahun lebih	
91-120 ekor	2 ekor anak unta	3 tahun lebih	
121 ekor	3 ekor anak unta	2 tahun lebih	
Sapi dan Kerbau	30-39 ekor	1 ekor anak sapi atau seekor kerbau	2 tahun lebih
	40-59 ekor	1 ekor anak sapi atau seekor kerbau	2 tahun lebih
	60-69 ekor	2 ekor anak sapi atau 2 ekor kerbau	1 tahun lebih
	70 ekor	1 ekor anak sapi atau seekor kerbau dan 1 ekor anak sapi atau seekor kerbau	2 tahun lebih
Kambing	40-120 ekor	1 ekor kambing betina biasa	2 tahun lebih
		1 ekor kambing domba betina	1 tahun lebih
	121-200 ekor	2 ekor kambing betina biasa	2 tahun lebih
		2 ekor kambing domba betina	1 tahun lebih
	201-399 ekor	3 ekor kambing betina biasa	2 tahun lebih
		3 ekor kambing domba betina	1 tahun lebih
400 ekor	4 ekor kambing betina biasa	2 tahun lebih	
		4 ekor kambing domba biasa	1 tahun lebih

6) Zakat on Found Items: namely zakat issued from assets found or assets obtained from unintentional means such as inventions, relics, treasures, and the like. The *nishab* is 20% of the value of the property and zakat is issued when the goods are obtained (Mahjudin, 2003).

d. *Mustahiq* of Zakat

There are 8 (eight) groups of people who are entitled to receive zakat funds (*mustahiq*), this is based on the word of Allah QS. al-Taubah: 60. The eight groups are:

- 1) Faqir and poor: faqir are those who are so short of wealth that they are unable to meet their basic needs. While the poor are those who have income but are unable to meet their basic needs (Ministry of Religion, 2009).
- 2) 'Amilin: those who manage zakat from the start to collect zakat funds from zakat obligations, record them, then distribute them to those who are entitled to get them. They are entitled to a maximum of 12.5% provided they carry out the task as well as possible and most of their time is used for the task (Baznas, 2016). The role of amilin is very important because the process of distributing zakat funds is very difficult without their role (Lestari, 2015)
- 3) *al-Muallafatu Qulubuhum*: that is a group that is still considered weak in faith because they have just converted to Islam. Zakat given to them is expected to increase their faith. Some scholars argue that zakat can also be given to

- unbelievers who are expected to be Muslim. This is like the zakat that the Prophet gave to Sufyan bin Umayyah when he was an infidel (Ardianis, 2018).
- 4) *Fi riqab or freeing slaves*: zakat can be used to free the slave so that the status of the slave becomes free and becomes a complete human being (Sa'di, 2003).
 - 5) *al-Gharimin*, namely those who are in debt to meet their basic life needs and do not have the ability to pay them because of their poverty or because of bankruptcy (Hamdan, 2009). Gharimin is divided into two: *First*, people who bear debts are related to efforts to improve relations between people. For example, it relates to paying *diyat*, improving relations between people, or stopping slander. This is in accordance with the hadith of the Prophet: “*O Qabishah, indeed begging is not permissible (not lawful) except for three groups. (One) person who bears a debt (gharim, to reconcile two people who are in dispute or something like that). So that person may beg, until the debt is paid off. When the debt has been paid off, then he is no longer allowed to beg*” (Muslim, 2004). *Second*, people who are in debt because it is related to their personal affairs if they are not in a forbidden case (Qahthani, 2010).
 - 6) *Fi Sabilillah*, namely those who fight in the way of Allah, whether they are fighting as fighters in the war to defend Islam, students of knowledge or those who preach to spread the teachings of Allah's religion (Hafiduddin, 2018).
 - 7) *Ibn Sabil*, namely those whose supplies are cut off on the way if they are not in the context of disobeying Allah. Zakat is given to him to meet his needs during the journey until he can return to his country.

e. Zakat and the Growth of Community Economy.

Zakat has a very large role in the economic growth of the community, especially in efforts to improve the economy of the poor and needy groups. This is because with zakat there is a distribution of money/wealth from top to bottom, from *muzakki* to *mustahiq*, then the *mustahiq* spend the money for their needs, then there is a circulation of money which is the main factor of economic growth.

Over time, the management of zakat funds in the distribution aspect has progressed. Based on the philosophical purpose of zakat, which is to improve the welfare of the poor and needy, so that they change their status from *mustahiq* to *muzakki*, the distribution of zakat is not only limited to distributing cash or food and necessities of life, but to be more productive, the zakat funds given can develop not only used for daily needs. Therefore, the term productive zakat appears.

About productive zakat, the government in this case the Minister of Religion of the Republic of Indonesia has issued a decision no. 373 of 2003 concerning the management of zakat funds, that the distribution of zakat funds must be based on economic development. The distribution of this type of zakat is carried out in the form

of providing business capital to *mustahiq* directly or indirectly, the management of which may or may not involve *mustahiq*. The distribution of zakat funds is directed at productive economic efforts, the results of which are expected to raise the level of community welfare.

Technically, productive zakat distribution is divided into two, namely conventional productive and creative productive. Conventional productive zakat is zakat given in the form of productive goods, whereby using these items, *muzakki* can create a business, such as helping for goats, dairy cows or for plowing fields, carpentry tools, sewing machines. While creative productive zakat is zakat which is manifested in the form of providing revolving capital, both for social project capital, such as social development, school construction, health facilities or places of worship as well as business capital to assist or for business development of traders or small entrepreneurs (Fitri, 2017)

2. The Role of MSMEs for Economy of Indonesia

a. Definition of MSMEs

Based on Law No. 20 of 2008, the criteria for Micro, Small and Medium Enterprises (MSMEs) based on total assets are as follows: (1) Micro-enterprises have a maximum net worth of Rp. 50,000,000.00 (fifty million rupiah) excluding land and buildings for business premises; or have annual sales of at most Rp. 300,000,000.00 (three hundred million rupiah). (2) Small Business has a net worth of more than Rp. 50,000,000.00 (fifty million rupiah) up to a maximum of Rp. 500,000,000.00 (five hundred million rupiah) excluding land and buildings for business premises or having annual sales of more than Rp. 300,000,000.00 (three hundred million rupiah) up to a maximum of Rp. 2,500,000,000.00 (two billion five hundred million rupiah). (3) Medium Enterprises have a net worth of more than Rp. 500,000,000.00 (five hundred million rupiah) up to a maximum of Rp. 10,000,000,000.00 (ten billion rupiah); or have annual sales of more than Rp. 2,500,000,000.00 (two billion five hundred million rupiah) up to a maximum of Rp. 50,000,000,000.00 (fifty billion rupiah).

According to article 2 of Law no. 20 of 2008, MSMEs are based on: (1) kinship; (2) economic democracy; (3) togetherness; (4) fair efficiency; (5) sustainable; (6) environmentally friendly; (7) independence; (8) balance of progress; and (9) national economic unity. Meanwhile, the purpose of MSMEs is to grow and develop their business to build a national economy based on just economic democracy.

In addition to using monetary value as a criterion, the Ministry of Industry, and the Central Statistics Agency have so far used the number of workers as a measure to define the criteria for business scale. According to BPS, Indonesian Micro Enterprises

are business units with up to 4 permanent employees; Small Business (UK) between 5 to 19 workers; Medium Enterprises (ME) from 20 to 99 people. Companies with more than 99 employees are included in the category of Large Enterprises (UB). So, in determining the scale of the business, it depends on which side it is assessed, whether from the monetary side or in terms of the number of workers absorbed. The two will be directly proportional, if the capital issued is large, the tendency of the production of the business is also large, then the number of workers that have been collected is of course also large, and vice versa (Elsandra, 2013).

b. MSMEs and Pandemic Covid-19

The Covid-19 pandemic that lasted for quite a long time had a significant impact on people's lives in the world, including people in Indonesia. One of the affected aspects is the economic aspect, especially the MSMEs sector (Nalini, 2021).

The slumping condition of MSMEs greatly affects the Indonesian economic condition where the contribution of MSMEs to the Indonesian economy is very large in various fields, including (1) The number of Business Units in Indonesia as of 2018 is a total of 64.2 million business units, with the number of MSMEs units being 64.1 Million (99.9%) (2) Contribution to total workforce, Total workforce in Indonesia as of 2018 totals 120.6 million people, with the number of workers in MSMEs amounting to 116.9 million (97%) (3) Contribution to GDP , The total GDP contribution of the business world in Indonesia as of 2018 totaled 14,038,598 billion, with the contribution of MSMEs to GDP of 8,573,895 billion (61.07%) (4) Contribution to Non-Oil and Gas Exports The total number of Indonesia's non-oil and gas exports per 2018 was 2,044.490 billion, with the contribution of MSMEs to non-oil exports of 293,840 billion (14.37%) (5) Contribution to investment, Total investment in Indonesia per 2018 totaled 4,244,685 billion, with the contribution of MSMEs to investment of 2,564.549 billion (60.42%).

One of the impacts of the COVID-19 pandemic that has hit MSMEs is that as many as 1,785 cooperatives and 163,713 micro, small and medium enterprises have been affected by the coronavirus (Covid-19) pandemic. Most of the cooperatives affected by Covid-19 are engaged in daily necessities, while the MSMEs sector that is most affected is food and beverage. Cooperative managers feel the decline in sales, lack of capital and hampered distribution. Meanwhile, the MSMEs sector that was shaken during the Covid-19 pandemic, apart from food and beverages, was the creative industry and agriculture. In this pandemic situation, according to the Ministry of Cooperatives and MSMEs, there were around 37,000 MSMEs who reported that they were very seriously affected by this pandemic, which was marked by around 56 percent reporting a decline in sales, 22 percent reporting problems in the

financing aspect, 15 percent reporting problems with distribution of goods, and 4 percent reported difficulties in obtaining raw materials (Thaha, 2020).

c. Zakat and MSMEs

The Covid-19 pandemic which has been running for quite a long time has had a very significant impact on the community's economy, especially in the MSMEs sector, not a few have suffered losses and even went bankrupt. This requires a solution so that the MSMEs sector can be saved so that the economic condition of the Indonesian people will improve again.

One of the potentials that can be considered as a solution in dealing with this is zakat. Philosophically, the purpose of zakat worship is to improve the welfare of the poor and needy so that their basic needs of life can be fulfilled, this is so that the social gap between the rich and the poor is not too far away. In practice, to maximize these efforts, the concept of productive zakat is a breakthrough in the distribution of zakat funds, whether managed by official zakat institutions or by individuals, it is hoped that *mustahiq* can change their status to *muzakky*. Productive zakat is the provision of capital from the rich to the poor so that they cannot do business or do business with the capital, not a consumptive gift that is used up for the needs of daily life.

Regarding the role of zakat to save MSMEs during the Covid-19 pandemic, there are several rules that need to be considered:

- 1) *al-Ashlu fi al-'ibadah at-Tahrim, illaa maa dalla 'alaiha ad-dalil*, the original law of worship (ritual) is haram, unless there is a proposition that commands it. This rule explains that ritual worship cannot be carried out until there is an argument that commands it. Ritual worship must be carried out in accordance with what Allah commanded and exemplified by the Messenger of Allah, the suitability includes six things, namely according to the cause, according to the type, according to the level, according to the procedure, according to the time, and according to the place. (Utsaimin, 2006). Zakat is one of the social rituals of worship and is one of the pillars of Islam, so its implementation must be in accordance with what Allah has commanded and exemplified by the Prophet.
- 2) *La ijtihada ma'a an-nash*, there is no ijihad when there is evidence (al-Quran or hadith) on a case, especially in matters of worship (Syami, 2018), one of which is zakat.
- 3) *La qiyasa fi al-'ibadat*, there is no qiyas in worship, meaning that the arguments on which the ritual worship is based must be authentic and sharih (explicit). A worship cannot be analogous to other ritual worship (Samarqandi, 1992), therefore, everything related to zakat worship cannot be analogous to other worship or worship cannot be analogous to zakat.

The worship of zakat has been explained clearly by Allah and the Messenger of Allah. This clear explanation relates to who is included in the category of obligatory zakat, when to pay zakat, the value of assets that must be issued, and who is entitled to receive zakat. Based on this, whether zakat can be used as a solution in saving UMKM, it is necessary to pay attention to several conditions, namely:

- 1) If due to the Covid-19 pandemic, a person's business is destroyed until his property runs out, especially until he has a large debt, then zakat funds can be distributed to him as capital to build new MSMEs.
- 2) if due to the Covid-19 pandemic, a person's business declines, but still has assets that can be sold and used as capital to build new MSMEs then zakat funds cannot be distributed to him, because he is not included in the category of eight groups that are entitled to receive zakat.

The Covid-19 pandemic has had a significant impact on the community's economy, especially in the MSMEs sector, conditions like this require a solution so that the MSMEs sector can be saved. Zakat which is a social ritual worship can be used as a solution for this condition, but because zakat worship is a ritual worship, the implementation of zakat as a solution for the recovery of MSMEs cannot be separated from the guidelines that have been outlined explicitly both in the Qur'an and Sunnah. Regarding the distribution of zakat funds for MSMEs actors whose businesses have been affected by Covid-19, this can be done if MSMEs actors have entered the category of eight groups that are entitled to receive zakat. If they experience a decline in their business, but they still have assets that can be used as new capital for their business, then zakat funds cannot be distributed to them.

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NAQLI AND AQLI INTEGRATION IN FORENSIC MEDICINE CURRICULUM FOR MEDICAL UNDERGRADUATE IN UNIVERSITI SAINS ISLAM MALAYSIA

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Abstract

Forensic medicine or also known as legal medicine or medical jurisprudence has been studied and practiced since ancient times until today. This subject is compulsory in the Malaysian medical curriculum as doctors are bound to a number of legal responsibilities spelled by law. As a unique institution that delivers knowledge with comprehensive approach, Universiti Sains Islam Malaysia (USIM) teach Forensic Medicine with integration of the revealed knowledge (Naqli) and acquired knowledge (Aqli). This paper outlines the naqli and aqli integration in USIM's Forensic Medicine curriculum. Relevant quranic verses, hadith and fatwa are introduced to the students on selected topics. In addition, students are also expected to discuss the topics based on inter-religion and inter-racial practice. This holistic approach hopefully helps to equip our medical graduates so they shall be able to fulfill the medical, legal, and social responsibilities in managing forensic medicine cases and issues surrounding it, particularly death and management of the dead.

Keywords: Forensic medicine, forensic pathology, medical education, aqli and naqli integration

INTRODUCTION

It is well documented in Forensic Medicine textbooks that the term forensic comes from the Latin word "forensis" which means pertaining to the forum. This brings us back to the Roman era where the said forum was a physical space in which matters such as politics, economy and law were discussed (Burton 2014). As for latter-day, the term forensic has become almost exclusively referring to the use of medical and scientific knowledge in a judicial setting and for most laymen, forensic equates crime, dead body and autopsy.

Forensic medicine is applied to establish facts in civil or criminal legal cases. It deals with examining and assessing individuals who have been or are suspected to

have been injured or killed by external influence such as trauma or intoxication, and of individuals suspected of having injured another person. Therefore, every doctor plays an important role when dealing with forensic cases and at least basic forensic knowledge must have been taught at the undergraduate level. Forensic medicine or also known as legal medicine or medical jurisprudence has been studied and practiced since the ancient time and until today, this important piece of medical knowledge is still being taught in medical school despite some serious decline in the teaching of the subject to undergraduates in some part of the globe (Vanezis 2021). In Malaysia, Forensic medicine is a mandatory subject for undergraduate medical students. Our fresh medical undergraduates are expected to achieve Level 1 competency, that is to be aware of the condition based on literature at the level of overview (Malaysian Medical Council 2022).

At Universiti Sains Islam Malaysia (USIM), the Forensic Medicine course is given to the fourth-year medical students as part of their clinical training. Students are also required to attend autopsy sessions at the hospital where they will observe or assist in post-mortem examination and procedures done during the autopsy session such as blood taking, swab for trace evidence, wounds and injury documentation, specimen handling and chain of custody. Input on religious teaching and cultural practice surrounding the issues of death and autopsy are also discussed during lectures, seminars, and tutorials. This paper aims to describe the responsibility of doctors in managing forensic medicine cases and their responsibility in managing issues surrounding it, particularly death and management of the dead. This paper will also outline the *naqli* and *aqli* integration in USIM's Forensic Medicine curriculum in order to equip our medical graduates with the knowledge so they shall be able to fulfill those responsibilities.

MEDICOLEGAL RESPONSIBILITY OF A GOVERNMENT MEDICAL OFFICER AND RESPONSIBILITY IN MANAGING THE DEAD

Under Malaysian law, Inquiries of Death Chapter XXXII (CPC 593) Section 331 stated that a postmortem examination of the body must be done by a fully registered government medical officer to ascertain the cause of death after being ordered by the police. The main role of the doctor is to practice and mediate a scientific approach to the medical issues raised in a legal context involving death. In Malaysia, the number of autopsies per year is accelerating, for instance, the National Institute of Forensic Medicine (IPFN) in Hospital Kuala Lumpur alone is handling more than 600 forensic cases per year (HKL 2022). Hence, every doctor must be equipped with knowledge in Forensic Medicine so that the minimum standard of practice is well-maintained. Although a large part of Forensic Medicine involves the examination of the dead body (Forensic Pathology), it also includes the examination of skeletal remains (Forensic Anthropology), and clinical forensic examination of living detainees or suspects and victims of crimes as well (Clinical Forensic). In addition, forensic medicine experts are

well-trained in managing mass fatality incidents, crime or death scene investigations, and high-risk autopsies.

Forensic examination requires attention to detail, constant vigilance, and high integrity. A doctor acts as the representative of the deceased or patients who were unable to speak for themselves. Each wound needs to be carefully inspected, each part of the body and organs needs to be thoroughly investigated and any necessary specimen needs to be tested. While performing the examination scientifically, the dignity of the deceased or the patient must be preserved. Deceased bodies should be respected as they are alive. After conducting a forensic examination, the doctor shall prepare a report based on the findings, histopathological examination, and laboratory analysis of body fluid and tissue samples. They are often required to present in court to provide expert testimony based on the reports produced. The testimony should be truthful, transparent, and unbiased.

Besides the medicolegal responsibilities described above, doctors who worked in the forensic medicine department are also responsible in monitoring the process of managing the deceased body in all circumstances and environments from when death occurs, until lawful disposal. This includes ensuring that the deceased body is managed in a proper and dignified manner including consideration for the needs of bereaved families based on their custom. Apart from medical knowledge, this is where awareness in the multi-religious and multi-cultural practice of dead body management becomes handy. A recent example was managing COVID-19 death which involves coordination from various teams including forensic medicine, infectious disease control, local Islamic body and funeral services from other religions.

INTEGRATING NAQLI AND AQLI COMPONENTS IN THE FORENSIC MEDICINE CURRICULUM

In USIM, Forensic Medicine is offered during the second semester of Year 4. The teaching-learning methodology includes interactive lectures, postmortem viewing, case presentation, seminars, self-directed learning (SDL), mock trial, quizzes and writing autopsy reports. This posting is a 2-credit-hour posting that runs for 2 weeks and is divided into 2 parts. The first part is a 1-week lecture where the students are exposed to theoretical knowledge. The second part is a 1-week practical and discussion. Students are expected to observe and study a minimum of 3 autopsies at respected hospitals. These cases are then presented and discussed during the second part of the posting. Each student is expected to write one autopsy report based on the case they had observed. Integration of *naqli* components is done by stating relevant quranic verses, *hadith* and *fatwa*. Students are also expected to briefly discuss relevant issues based on various local cultures involving multi-religious and multi-racial practice. Listed in Table 1 are the course contents and mapping of the *naqli* integration.

TABLE 1: COURSE CONTENTS AND MAPPING OF THE NAQLI INTEGRATION.

No.	CONTENT	NAQLI INTEGRATION	TEACHING AND LEARNING METHOD
1	Introduction to forensic medicine & forensic services in Malaysia	Upholding justice - 57:25	LECTURE
2	Sudden death report & medicolegal investigation of death	Death as a lesson to the living – 67:2	
3	Post-mortem changes	Fate of body and fate of soul - al-Bukhari #4935	
4	Wounds and injuries	An eye for an eye 5:45	
5	Autopsy procedure & negative autopsy	Islamic ruling on autopsy Ethics and conduct during autopsy - al-Bukhari #1393, Abi Dawud #3207	
6	Ancillary investigation in forensic medicine & medicolegal specimen	-	
7	Poisoning & toxicology	-	
8	Clinical forensic medicine	-	
9	Death due to asphyxia and drowning	-	
10	Death due to natural disease	-	
11	Child death	-	
12	Maternal death	-	
13	Forensic anthropology	-	
14	Transportation injuries	-	

15	Firearm-related death	-	
16	Fire, thermal, electrical & lightning injuries	-	
17	Mass Disaster Management & Human Identification	Make haste - Al-Bukhari #1315	SEMINAR
18	Management, handling and last rite of deceased body in special circumstances	Islamic ruling on unfound body (al-maqfud) Last rite in special circumstances	
19	Court attendance & expert witness	Nothing but the truth - 4:135 Only what you know - 17:36	MOCK TRIAL
20	Autopsy viewing & autopsy report	The huge mountain - al-Bukhari #1325	PRACTICAL
21	Case discussion	-	TUTORIAL

Upholding justice through Forensic Medicine

In the first two lectures, *Introduction to Forensic Medicine and Sudden Death Report and Medicolegal Investigation of Death*, students are taught about the role of Forensic Medicine in upholding justice. They are introduced to several relevant sections of Act 593 Criminal Procedure Code and Evidence Act 1950 which relate to their legal responsibility as a doctor. On the naqli part they are reminded of Surah Al-Hadid verse 25 where Allah SWT emphasizes on the administration of justice by sending clear proofs through His messengers:

“Indeed, We sent Our messengers with clear proofs, and with them We sent down the Scripture and the balance ‘of justice’ so that people may administer justice. And We sent down iron with its great might, benefits for humanity, and means for Allah to prove who ‘is willing to’ stand up for Him and His messengers without seeing Him. Surely Allah is All-Powerful, Almighty”

(Surah Al-Hadid 57:25)

Death as a lesson to the living

As students are taught about how death investigation and proper certification of cause of death are important in medicine, they are also reminded that in every death there are lessons and guidance (Imam Al-Ghazali). Learning from the dead is a well-known concept in medicine in terms of scientific knowledge. Anatomists and pathologists benefit from body dissection and autopsy. Public health specialists and law enforcers use mortality data to plan for disease and injury prevention. As Muslim doctors, death brings far greater lessons than just scientific knowledge. Studying about death should bring us closer to our creator and it encourages us to be the best Muslim in every aspect of life. Medical students in USIM are reminded of this fact through a Quranic verse integrated into their teaching:

‘He is the One’ Who created death and life in order to test which of you is best in deeds. And He is the Almighty, All-Forgiving.

(Surah Al-Mulk 67:2)

The fate of body and fate of the soul

Lectures on *Postmortem Changes* discuss the definition of death, diagnosis of death, physical changes after death and other medical issues surrounding it such as organ procurement. Students are introduced to terminology such as algor mortis, livor mortis and rigor mortis and how these changes help forensic pathologists to estimate the time since death. Students are also taught about the physical fate of the body such as decomposition, mummification, saponification and how eventually a body can undergo complete dissolution or fossilization. As Muslims, we believed that the human body will be recreated on the Day of Resurrection as narrated by Abu Hurairah RA:

Allah’s Messenger (ﷺ) said, “There is nothing of the human body that does not decay except one bone; that is the little bone at the end of the coccyx (Ajb al-Zanab) of which the human body will be recreated on the Day of Resurrection”.

(Sahih al-Bukhari #4935)

The fate of the soul after death starting from *barzakh* to heaven or hell is briefly mentioned together with interfaith comparisons such as reincarnation in Buddhism and Hinduism.

An eye for an eye

We have shown that Islam emphasized justice. In fact, the Quran has outlined the punishment for various crimes. One of the verses in the Quran stated the fair punishment of homicide and bodily injury.

We ordained for them in the Torah, "A life for a life, an eye for an eye, a nose for a nose, an ear for an ear, a tooth for a tooth—and for wounds equal retaliation." But whoever waives it charitably, it will be atonement for them. And those who do not judge by what Allah has revealed are 'truly' the wrongdoers.

(Surah Al-Ma'idah 5:45)

Although Malaysian law does not strictly follow the recommendation in the Quran, the penalty by the court is based on the severity of the bodily injury. Sections 319 and 320 of the Penal code (Act 574) mentioned "hurt" and "grievous hurt" and a few sections after it spelled out the punishment. As a doctor who examines a body or a patient, the description and interpretation of wounds and injuries are crucial for the judge to decide on the severity of the punishment.

Islamic ruling on autopsy

A forensic autopsy is done under the mandate from the police by means of *Borang Polis 61*. By this order, the next of kins do not have the power to refuse the autopsy. Many a time, Muslims will argue on the decision based on the belief that any form of alteration to the dead body is a sinful act and an affront to the dignity of the deceased. It is the responsibility of the doctor to inform the family members that the Malaysian National Fatwa Committee in its 8th meeting in 1984 ruled that post-mortem examinations are permissible in criminal cases as it is regarded as *dharurah*. In 2004, the Committee also ruled that post-mortem examinations are permissible in non-criminal cases for the purpose of medical research and education (JAKIM 2015). In addition, the practice of forensic medicine is in agreement with Maqasid al-Shari'ah to uphold the faith, life, intellect, progeny and property. It assists in upholding justice which contributes to peace and tranquility.

Ethics and conduct during autopsy

Postmortem viewing allows students to observe the process of autopsy and like other clinical subjects, the courteous ethics must be maintained. Respect and confidentiality of the dead body is the utmost responsibility of the students.

Narrated `Aisha:

The Prophet (ﷺ) said, "Don't abuse the dead, because they have reached the result of what they forwarded."

(Sahih al-Bukhari #1393)

Autopsy must be done with care and full of dignity as we hold to the Hadith narrated by 'Aisyah (r.a):

The Prophet (ﷺ) said, "Breaking the bone of one who is dead is like breaking it when he is alive"

(Sunan Abi Dawud #3207).

Make haste

Seminar on *Mass Disaster Management & Human Identification* discussed the importance of victim's management and identification in terms of public health, legal and social welfare of the next of kins. Proper coordination and management are needed to hasten the process of identification and lawful disposal of the body.

Narrated Abu Huraira:

The Prophet (ﷺ) said, "Hurry up with the dead body for if it was righteous, you are forwarding it to welfare; and if it was otherwise, then you are putting off an evil thing down your necks."

(Sahih al-Bukhari #1315)

Unfound bodies and last rite in special circumstances

Issues regarding unfound bodies are discussed in the seminar *Management, Handling and Last Rite of Deceased Body in Special Circumstances*. Students are expected to present on the ruling of missing person (al- maqfud) based on opinions by Muslim scholars, Malaysian civil law and *syariah* law. Also discussed in this seminar are the practice of last rites of body parts, burn and severely decomposed bodies as well as bodies with highly infectious disease such as COVID-19.

Nothing but the truth

All medical cases are potentially medicolegal. Doctors are often called to the court to give testimony on the cases they have attended to be it in civil or criminal court. USIM's students are exposed to court procedure by lecture and mock trial so they can practice giving testimony. The testimony should be fair, unbiased and under no circumstances should be given to assist one side rather than the other as stated in surah An-Nisa verse 135:

O believers! Stand firm for justice as witnesses for Allah even if it is against yourselves, your parents, or close relatives. Be they rich or poor, Allah is best to ensure their interests. So do not let your desires cause you to deviate from justice. If you distort the testimony or refuse to give it, then know that Allah is certainly All-Aware of what you do.

(Surah An-Nisa 4:135)

Only what you know

In writing reports and giving testimony in court, doctors must be fully aware of what they are testifying. Students are warned to study and fully understand their case and seek help from their senior colleagues for guidance and clarification if needed as they

must not testify to what they do not know and beyond their expertise. This is stated in surah Al-Isra verses 36.

Do not follow what you have no 'sure' knowledge of. Indeed, all will be called to account for 'their' hearing, sight, and intellect.

(Surah Al-Isra 17:36)

The huge mountain

USIM's students are required to observe or assist a minimum of three autopsies at the mortuary. While fulfilling the academic requirements, students are encouraged to take the opportunity to be involved in the funeral process including washing and shrouding of Muslim body and offer funeral prayer afterwards as there is a huge reward promised by Allah SWT.

Narrated Abu Huraira:

The Prophet (ﷺ) said, "Whoever attends the funeral procession till he offers the funeral prayer for it, will get a reward equal to one Qirat, and whoever accompanies it till burial, will get a reward equal to two Qirats." It was asked, "What are two Qirats?" He replied, "Like two huge mountains."

(Sahih al-Bukhari #1325)

CONCLUSION

The objective of the Forensic Medicine curriculum for medical undergraduates is to prepare the students for their legal responsibility as stated in Malaysian Law. This responsibility starts as soon as they become a fully registered medical officer and the duty includes examining wound and injuries sustained due to accident, criminal offense, sexual assault, or domestic violence victims. They might need to perform postmortem examination on non-complicated cases such as death due to motor vehicle crash, drowning, fall from height or hanging. As for complicated cases, they must be able to recognize it and refer the case accordingly. The course content of USIM's Forensic medicine curriculum has been structured according to Malaysian Medical Council requirements and no doubt can fulfill the expected objectives. As "The Leader in the Integration of Naqli & Aqli Knowledge" USIM offers more than just acquired knowledge (*Aqli*) but rather a holistic approach in its curriculum. Integrating revealed knowledge (*Naqli*) and inculcating inter-religious and inter-racial understanding in Forensic Medicine curriculum brings this course into a different level.

Equipped with this knowledge, our medical graduates should be able to practice forensic medicine with confidence if they are posted to forensic department as well as apply forensic medicine in other medical discipline if needed, for example when they face possible child abuse case in pediatric ward or illegal abortion in gynecology ward. On top of that, we expect our students to be a competent medical witness who always

upholds truth and justice and when it comes to managing the dead, they can offer their best to fellow Muslims and others from different religions and cultural backgrounds.

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CHARACTERIZATION OF HYDROPHOBIC AND OLEOPHILIC PROPERTIES OF PARAFFIN IMMERSSED POLYURETHANE SPONGE BY USING CONTACT ANGLE METHOD

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Abstract

In this study, a simple and low cost wax-infused sponge was fabricated from home ready appliances. The wax-infused sponge was fabricated by immersing cleaned and dried polyurethane sponge into liquefied paraffin wax then let solidified at room temperature. The properties of hydrophobicity and oleophilicity were measured and tested by using the contact angle method. The water contact angle measurement on the surface of the wax-infused sponge showed a higher reading ($> 90^\circ$) than on untreated polyurethane sponge. Meanwhile, the cooking oil contact angle reading on wax-infused sponge was found immeasurable as the oil droplet instantaneously absorbed into the porous structure of the wax-infused sponge which showed excellent oil absorbing ability. Additionally, the water and cooking oil contact angle measurement significantly showed that the wax-infused sponge material exhibits both properties of hydrophobic (water repelling) and oleophilic (oil absorbing) properties at the same time.

Keywords: sponge, hydrophobic, oleophilic, contact angle.

INTRODUCTION

Sponge is a well-known daily object with porous structure that holds the properties of hydrophilic and oleophilic at the same time. This means, sponge will absorb both water and oil simultaneously once in contact with them. These base properties of sponge can help to solve problems where both water and oil are needed to be absorbed. However, some situations require the separation of liquid-liquid medium such as oil from the surface of water, to clean an oil spill tragedy and also water pollution (Lei Peng et al., 2014; Tjandra et al., 2015). Hence, the usage of material with properties of same as regular sponge will be non-practical and less efficient as it might also be filled up with absorbed water. Thus, the demand for a material with properties of hydrophobic and oleophilic at the same time has risen in order to solve this kind of problem.

Hydrophobic surface is defined as a surface that has the ability to repel or rebound water, hence causes water to make less contact area when in touch with hydrophobic surface (Liu et al., 2014). This phenomenon will prevent water from wetting the targeted surface thus ensure the cleanliness of the surface from dust and other particles while maintaining the original properties of the surface. The hydrophobic surface must have water contact angle of 90° or higher in order to be recognized as hydrophobic surface (Wankhede, 2013). Therefore, water droplets on hydrophobic surface will tend to form a more spherical shape than on non-hydrophobic surface (Xu et al., 2010). Hence, in order to achieve higher water contact angle ($\geq 90^\circ$), the surface of the material must be modified so that it has lower surface energy than the surface tension of water molecules.

The properties of solid surface energy, γ_s of paraffin wax which is as low as 33 mNm^{-1} is much lower when compared with surface tension, γ_l of water which is at 72.8 mNm^{-1} (Phillips & Riddiford, 1965). The lower the surface energy of a solid surface will ensure the lesser molecular interaction, especially hydrogen bonding, between the water droplet with the molecules from the solid surface and causes the water droplet to form in a more spherical shape (high contact angle) hence less wetting the solid surface (Zhou et al, 2012).

METHODOLOGY

Material Preparation

The polyurethane (PU) sponge and paraffin wax were bought from nearby grocery store and rinsed with distilled water and let to dry (Lei Peng et al., 2014; Tjandra et al., 2015). The paraffin wax was cut into smaller pieces and placed into an aluminium container and later placed in a boiling water to let it liquefy. The sponges were cut into $4\text{cm} \times 4\text{cm} \times 4\text{cm}$ cube sizes and then immersed into the liquefied paraffin wax. The PU sponge was left to absorb the liquefied paraffin wax until into the center of the cube. This immersed sponge (hereafter referred to as wax-infused sponge) was then taken out and left solidified at room temperature for 2 hours.

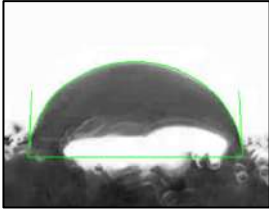
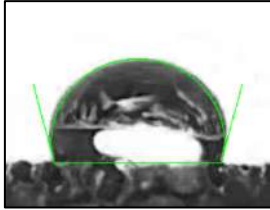
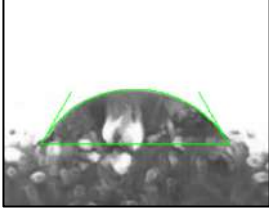

Characterization

The hydrophobic and oleophilic properties of the sponges were characterized by using contact angle method. $5\mu\text{l}$ of water and cooking oil droplet was dropped separately from the height of 5mm onto the surface of PU sponge and wax-infused sponge by using micropipette. The images of the droplets that settled on the surface were captured by using digital camera and then were analyzed by using Low-Bond Axisymmetric Drop Shape Analysis (LBADSA) plugin from ImageJ software to measure its contact angle. The contact angle measuring components were set up according to the American Society for Testing and Material (ASTM) D7334.

RESULTS AND DISCUSSIONS

Table 1 below shows the images and contact angles of the $5\mu\text{l}$ water and cooking oil droplet on the surface of PU and wax-infused sponge.

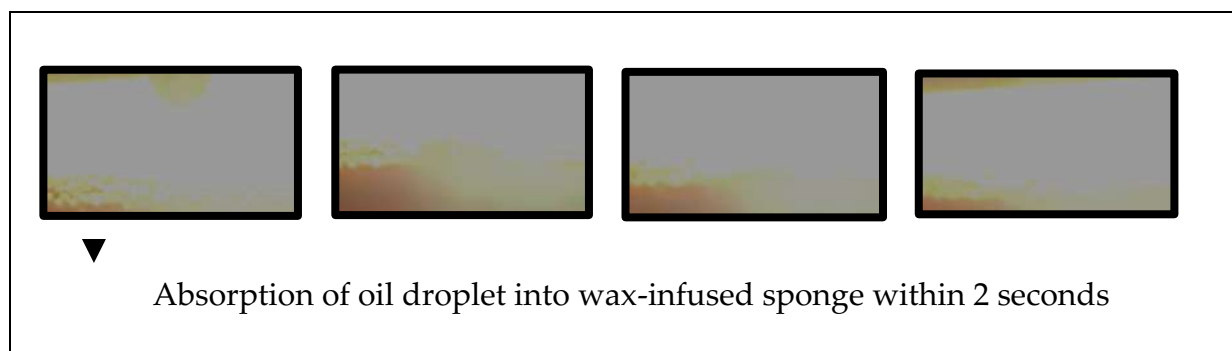
Table 1: Contact angle measurement on PU and wax-infused sponge

Droplet/Sponge type	PU sponge	Wax-infused sponge
Water	 Contact angle = 86.72°	 Contact angle = 104.39°
Cooking oil	 Contact angle = 59.76°	 No contact angle

From the Table 1, it is observable that the PU sponge has contact angle for water and cooking oil droplets less than 90° which clearly indicates the properties of hydrophilic and oleophilic at the same time. These are the common and expected properties for PU sponge. However, the wax-infused sponge shows water contact angle of higher than 90° that is sufficient to exhibit the hydrophobic properties. This result confirms that the present of paraffin wax that has solidified on the porous structure of the sponge has contributed in introducing hydrophobic properties by repelling water molecules away from the surface with contact angle of 104.39° and preventing it from being absorbed into the sponge (Kamusewitz, 1999). High contact angle obtained from water droplet is due to the low surface energy of paraffin wax (33 mNm^{-1}) compare to the surface tension of water (72.8 mNm^{-1}), thus making water droplet to appear spherical.

Besides that, cooking oil droplet was found instantaneously absorbed (in 2 seconds) when in contact with the surface of wax-infused sponge and that makes the measuring process for contact angle becomes impossible. This phenomenon indicates that the wax-infused sponge has better oil absorbing ability (oleophilicity) when in compared with the PU sponge where the cooking oil contact angle is still measurable at 59.76° . Figure 1 below shows the timelapse of the absorbance of cooking oil droplet when in contact with the surface of wax-infused sponge.

Figure 1: Time lapse of cooking oil droplet on the surface of wax-infused sponge



Paraffin wax and cooking oil molecular structure shares almost identical characteristic from the long carbon chain as they both are in the group of alkanes. The interaction of methyl/methyl from the surface of paraffin wax and cooking oil has always shown a low result on contact angle measurements (Phillips & Riddiford, 1965). Besides that, Tong Xu (2017) and Melo-Espinosa (2014) also reported in their study that the average surface tension for all kind of cooking oil lies between 30.5 mNm^{-1} to 33.2 mNm^{-1} at 20°C or at room temperature as surface tension is a function of temperature. These values of cooking oil surface tension lie below the surface energy level of paraffin wax, hence cooking oil is what predicted to wet the surface of paraffin wax. This means, by introducing paraffin wax with porous structure (with the help of PU sponge), helps to make the absorbing ability of oil into the sponge structure becomes better.

CONCLUSION

The wax-infused sponge was fabricated by going through a simple immersion method. A PU sponge with porous structure that is available at any local stores was immersed in liquified paraffin wax to produce a wax-infused sponge that exhibits both hydrophobic and oleophilic properties at the same time. Its water-repelling and oil-absorbing characteristics were measured by using contact angle method and shown a recorded result for water droplet at an angle of 104.39° . Meanwhile, cooking oil contact angle was found immeasurable as the droplet was observed instantaneously absorbed into the wax-infused sponge. The significant results show that the wax-infused sponge can be considered a promising candidate to undergo selective absorbing applications.

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THE IMPACT OF SOCIAL MEDIA IN FUNDING INTENTION TOWARD CROWDFUNDING PROJECT

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Abstract

Crowdfunding refers to a method of raising money from a large number of people where each individual provides a small money for a specific project through crowdfunding platform. To make crowd pledge and sustain the project, it is important to promote and publicize the project on a large scale over the social media. Hence, this study explores social media as a tool to promote, publicize and fund for sustainability of the crowdfunding project. In order to examine the impact of social media on the success project, this study will focus on the project owner's activities and connectivity with selected social media. A proposed framework based on the sharing project campaign and social media connectivity is designed to predict the success outcome of a project campaign.

Keywords: Sustainability, crowdfunding project, crowdfunding platform.

INTRODUCTION

Crowdfunding (CF) is a method of raising fund from crowd through small contributions for a specific project by using the Internet. Three important parties in crowdfunding: The platform, project owner and crowd (figure 1). CF platform takes an intermediary role between the project founder and crowd. These platforms use existing web-based payment systems to enable the exchange resources between project owner and funders (Kaur and Gera, 2017). The payment gateway Meanwhile project owner refers to a person that post a project on a crowdfunding platform to raise a fund (Reddy and Tan, 2017). Project owner has an opportunity to share their project by providing the video and copy writing in order to tell people about the project to raise awareness among crowd. Finally, the crowd is a large number of people that using the Internet. About CF platform, project owner can use social media and video sharing to raise awareness about their project (Nazarie and Williams (2021).

More than that, project owner can ask for their crowd to pledge or fund their project via social media.

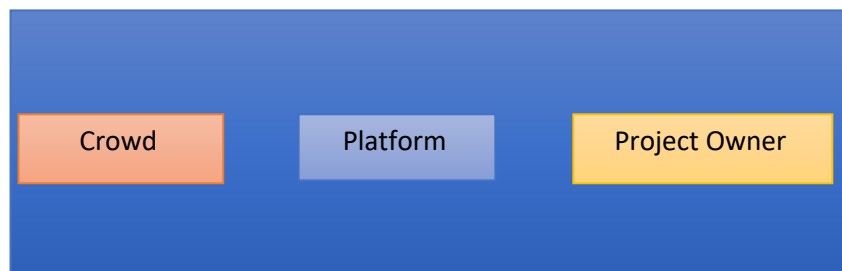


Figure 1: The parties in the CF platform

While various CF platform reported a large number of campaign but project that meet the goal target is still low (Liang et al., 2018). Though many projects have potential to be success but fail for the different reasons, such as lack of proper recognition, publicity, and promotion (Kaur and Gera, 2017). Social promotion refers as the element that encourages people to promote a CF project and spread to the circle of their social networking. Xu et al (2014) argues that project owner that always updates the project during campaign positively impact with funding intention among their crowd in social media.

In order to connect crowd with project campaign is by using the social media. Social media is a very good way to deliver a project campaign to the crowd that involve with interactive participation. Through social media, crowd will look at the more insights into a project campaign, not limited to social networking among project owners. In another word, when people know the project via social media, the number of people will fund to the project campaign.

Prior research has found that project owner that use social media to connect and promote their campaign increase 30 percent of campaign success (Clawson, 2015). The number of links to the different social media sites and shares the visibility and popularity of the project will increase the success rate of the project. Prior research has found that the size of project owner's social networking motivates crowd to fund to the project campaign (Gerber, 2012). Furthermore, CF connects to sustainability due to innovative application of social networking (Goodman and Polycarpou, 2013). However, little studies that examine the impact for social media tools on sustainability-oriented CF projects (Bejarano, 2017).

Therefore, the purpose of this paper is to propose a new conceptual framework with trust model in order to show how experiential context of social media influence people to fund the crowdfunding project.

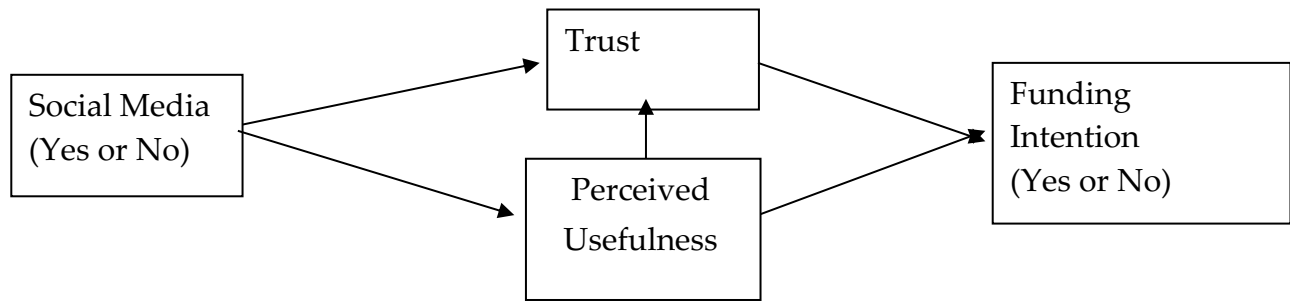


Figure 1.1: Conceptual Framework

The aim of this study is to identify the effect of social media on people perceptions of crowdfunding project by implementing laboratory experiments. This study propose these hypotheses:

H1: Trust of a crowdfunding project is positively associated with funding intention.

H2: Perceived usefulness is positively associated with trust.

H3: Perceived usefulness is positively associated with funding intention.

H4: The level of involvement crowd in social media is positively associated with trust.

H5: The level of involvement crowd in social media is positively associated with perceived usefulness.

METHODOLOGY

This study adopt 2 (social media: Yes or No) x 2 (funding intention: yes or no) between subject experimental design. This study utilized the between-group experiment design. The between-group experiment design is used in separate groups of subjects with different kinds of conditions (manipulation) in the experiment and each subject is tested only once. The experiment will be conducted with a single one-hour session for each subject. Each subject will be asked to complete the experiment individually and then they will be briefed about the consent form. The subject will only be notified that the project campaign had been extracted from an actual project in a CF campaign. Next, the manipulation check will be completed before conducting the actual experiment to prevent bias formed from responding to the dependent variables. Then, the subject will be asked to complete the questionnaire within the time given. Finally, each subject will be given a small gift for their participation.

CONCLUSION

Based on the literature reviews, it can be suggested that the relationship between the effectiveness of using the social media tools among backers and projects creators

impact the project funding outcomes. The independent variable of this study is the funding outcomes which consisting of success and failure outcomes. The dependent variable of this study is social media size and activation. The purposed variables will expect to influence the CF projects outcomes. Since this paper only focus on these two dependent variables and it is suggested for further empirical study must be done to support the proposed conceptual framework.

ACKNOWLEDGMENT

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SIMULATION OF NUMERICAL METHODS FOR ENGINEERING

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Abstract

Solving an equation to find its root is one of the most fundamental in mathematic. There are a lot of ways in order to solve an equation to find its root. In this report, there are 3 ways that we prioritize and focus, which is graphical method, bisection method and lastly the false position method. All of these methods has their own advantages and disadvantages that depends on how we adapt it in our calculation. Besides, all of those method, the scilab software also currently being used to carter the problems that related to the mathematical models. There result of these methods are provided in the report below, including its differences.

Keywords: *Graphical, Bisection, False position, Scilab*

INTRODUCTION

Numerical method is the area of mathematics and computer science that creates, analyses, and implements algorithms for solving numerically the problems of continuous mathematics. Such problems originate generally from real-world applications of algebra, geometry and calculus, and they involve variables which vary continuously; these problems occur throughout the natural sciences, social sciences, engineering, medicine, and business. During the past half-century, the growth in power and availability of digital computers has led to an increasing use of realistic mathematical models in science and engineering, and numerical analysis of increasing sophistication has been needed to solve these more detailed mathematical models of the world. The formal academic area of numerical analysis varies from quite theoretical mathematical studies to computer science issues. With the growth in importance of using computers to carry out numerical procedures in solving mathematical models of the world, an area known as scientific computing or computational science has taken shape during the 1980s and 1990s. This area looks at the use of numerical analysis from a computer science perspective. It is concerned

with using the most powerful tools of numerical method, computer graphics, symbolic mathematical computations, and graphical user interfaces to make it easier for a user to set up, solve, and interpret complicated mathematical models of the real world.

Next, the difference between analytical method and numerical method. Analytical methods are the most rigorous ones, providing exact solutions, but they become hard to use for complex problems. Solutions were derived for some problems using analytical, or exact, methods. Numerical methods have become popular with the development of the computing capabilities, and although they give approximate solutions, have sufficient accuracy for engineering purposes. Techniques by which mathematical problems are formulated so that they can be solved with arithmetic operations. For analytical, it is often useful and provided excellent insight into the behaviour of some systems but unfortunately can be derived for only a limited class of problems. While for numerical method, it is capable of handling large systems of equations, nonlinearities, and complicated geometries that are not uncommon in engineering practice and that are often impossible to solve analytically but commonly involves large numbers of tedious arithmetic calculations.

Finally, the importance of numerical method. A major importance of numerical method is that a numerical solution can be obtained for problems, where an analytical solution does not exist. An additional advantage is, that a numerical method only uses evaluation of standard functions and the operations: addition, subtraction, multiplication and division. With the development of fast, efficient digital computer, the role of numerical methods in engineering problem solving has increased dramatically in recent years. For examples engineering application of numerical method are estimating of ocean currents, prediction of oil spill, electromagnetics and etc. And for this assignment, we used 3 methods to locate the root which are graphical method, bisection method and false position method.

METHODOLOGY

Graphical method

Graphical method basically is one of the way to find the root for an equation, that is by plotting the X and Y coordinates. Basically, in the graphical method, there are about three steps that can be followed in order to find the roots for an equation. Firstly, equate the equation that were given, from example $e^x - x = 0$ with $f(x)$, $f(x) = e^x - x$. Next, by using that equation, we can find the X and Y coordinates by simply using the tables and using the appropriate scale (1, 2, 5, 10). In the table, find at least 3 positive and 3 negative value to make the graph even more details. Once the X and Y coordinate is plotted, find the X-intersection based on the graph. However, this graphical method is not completely fixed and not precise.

Bisection method

Bisection method starts with the limits of function on the interval $[a, b]$ where the function is defined. The function $f(x)$ is assumed to be continuous on the interval $[a, b]$ is chosen such that $f(a)f(b) < 0$. Thus, it is divided into two and more intervals. At each interval, the midpoint of the interval $c = \frac{a+b}{2}$ is computed and $f(c)$ is evaluated. Lastly, the process is repeated until a desired accuracy is achieved.

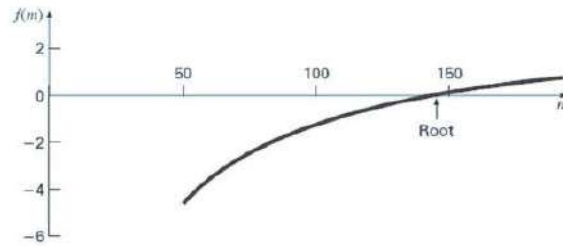


Figure 1: the graphical

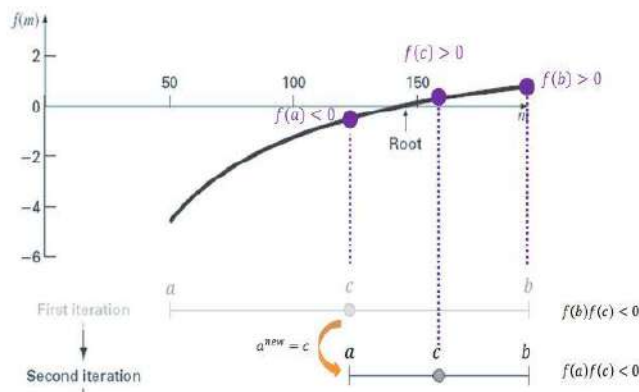


Figure 2 : second iteration

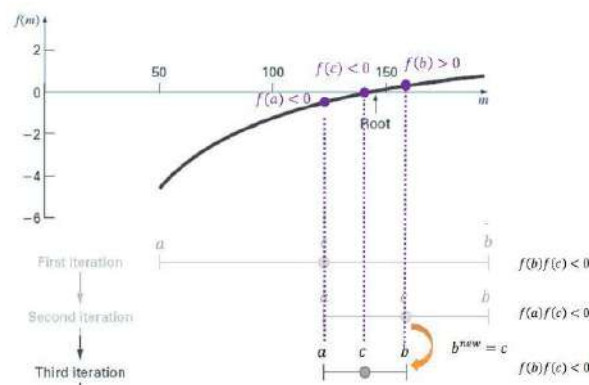


Figure 3 : Third iteration

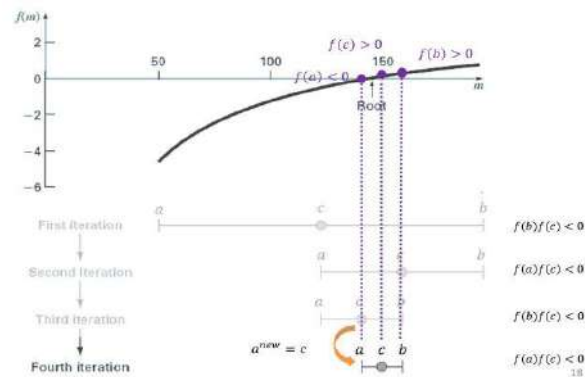


Figure 4 : fourth iteration

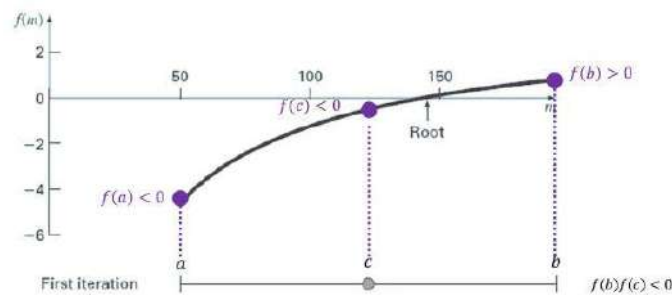


Figure 5 : Fifth iteration

Bisection Method steps.

1. Rearrange the equation to be equal to zero, $f(x) = 0$
2. Choose lower a and upper b guesses for the root such that the function
3. change sign over interval, or $f(a)f(b) < 0$
4. Define midpoint $c = \frac{a+b}{2}$, and $f(c)$.
5. determine if root exists : $f(a) * f(c)$ and $f(b) * f(c)$
 - After evaluate, go step 2
 - $f(C) = 0$, the root equals c . Terminate the computations
6. Calculate ϵ_a . If $|\epsilon_a| < \epsilon_s$, terminate the computation (if ϵ_s is given)
7. Repeated until desired iteration/accuracy
8. Root x^* is the c value of the last iteration

False position

The method of false position is a root finding algorithm that hybrid the features from bisection and secant method. It involves the bracketing of bisection method and the secant line in secant method. The method of false position is a root finding algorithm

that hybrid the features from bisection and secant method. It involves the bracketing of bisection method and the secant line in secant method. False Position Method also uses different strategy to estimate root. Locate root by joining $f(a)$ and $f(b)$ and with a straight line.

False position steps

1. The first steps to apply the false-position method to find the root of the equation are as follows.
2. Choose the lower guess a and upper guess b for the root, such that $f(a)f(b) < 0$
3. Define midpoint, c

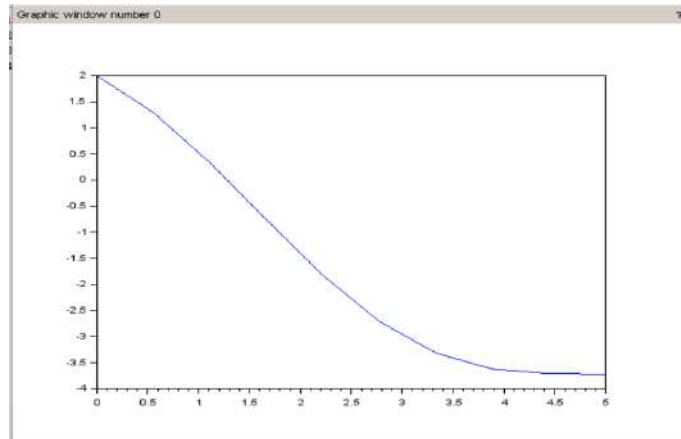
$$c = \frac{af(b)-bf(a)}{f(b)-f(a)}$$
4. Determine if root exists : $f(a) * f(c)$ and $f(b) * f(c)$
 - After evaluate, go step 2
 - $f(c) = 0$, The root equals c . Terminate the computations
5. Calculate ϵ_a . If less than ϵ_s , terminate the computation

$$\epsilon_a = \frac{c^{new}-c^{old}}{c^{new}} \times 100$$
6. Repeated until desired iteration/accuracy
7. Root is the c value of the last iteration

RESULT AND DISCUSSION

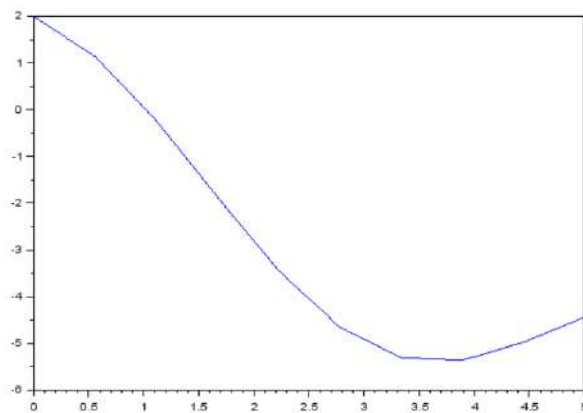
Simulation 1(I)

3) x	4) $f(x)$
5) 0.0	6) 2.00
7) 0.1	8) 1.90
9) 0.2	10) 1.78
11) 0.3	12) 1.66
13) 0.4	14) 1.52
15) 0.5	16) 1.38
17) 0.6	18) 1.23
19) 0.7	20) 1.06
21) 0.8	22) 0.90
23) 0.9	24) 0.72
25) 1.0	26) 0.54
27) 1.1	28) 0.35
29) 1.2	30) 0.16
31) 1.3	32) -0.03
33) 1.4	34) -0.23
35) 1.5	36) -0.43
37) 1.6	38) -0.63
39) 1.7	40) -0.83



Simulation 1(j)

41) x	42) $f(x)$
43) 0.0	44) 2.0
45) 0.1	46) 1.89
47) 0.2	48) 1.76
49) 0.3	50) 1.61
51) 0.4	52) 1.44
53) 0.5	54) 1.25
55) 0.6	56) 1.05
57) 0.7	58) 0.83
59) 0.8	60) 0.34
61) 0.9	62) 0.08
63) 1.0	64) -0.19
65) 1.1	66) -0.48
67) 1.2	68) -0.77
69) 1.3	70) -1.06



Based on the Simulation 1i, given to us the equation $\cos x - x - 1 = 0$. By using the first step, we must equate the equation with the $f(x)$ so it will become $f(x) = 2\cos X - X = 0$. Next, by using the 0.1 scale, there are about 14 point that can be plotted on the graph which is starting form 0.1 until 1.4. According to the manual calculation, the root of the equation that were obtained is 1.35. However, there is a slightly different with the scilab. In the scilab, the root that were obtained using scilab is 1.30.

Based on the Simulation 1j, given to us the equation $2\cos x - x = 0$. By inserting the function $f(x)$ into the equation, it become $f(x) = 2\cos x - x$. By using the 0.1 scale on the graph, the root that were obtained by using manual calculation is 1.05. However, the result that were obtained by using scilab is differ compared to the manual calculation which is 1.06

SIMULATION 2 (I)

$$\tan x - 2x + 3 = 0$$

Solution: Iteration $i = 0$

1. Rearrange the equation to be equal to zero,

$$f(x) = \tan x - 2x + 3 = 0$$

2. Choose the lower guess a and upper guess b

$$a = 1, b = 2$$

3. Estimate the root

$$c = \frac{(a+b)}{2} = \frac{(1+2)}{2} = 1.5$$

4. Evaluate $f(a) * f(c)$ and $f(b) * f(c)$

$$f(a) = f(1) = 2.5574 > 0$$

$$f(b) = f(2) = -3.1850 < 0$$

$$f(c) = f(1.5) = 14.1014 > 0$$

So, $f(b) * f(c) < 0$

$$a^{new} = 1.5$$

$$b^{new} = 2$$

5. Calculate the estimation error, ε

$$\varepsilon_a = \frac{c^{new} - c^{old}}{c^{new}} \times 100 = \frac{1.5 - 0}{1.5} \times 100 = 100\%$$

Solution: Iteration $i = 1$

2. Choose the lower guess a and upper guess b

$$a = 1.5, b = 2$$

3. Estimate the root

$$c = \frac{(a+b)}{2} = \frac{(1.5+2)}{2} = 1.75$$

4. Evaluate $f(a) * f(c)$ and $f(b) * f(c)$

$$f(a) = f(1.5) = 14.1014 > 0$$

$$f(b) = f(2) = -3.1850 < 0$$

$$f(c) = f(1.75) = -6.0204 < 0$$

So, $f(a) * f(c) < 0$

$$a^{new} = 1.5$$

$$b^{new} = 1.75$$

5. Calculate the estimation error, ε

$$\begin{aligned}\varepsilon_a &= \frac{c^{new} - c^{old}}{c^{new}} \times 100 \\ &= \frac{1.75 - 1.5}{1.75} \times 100 \\ &= 14.2587\%\end{aligned}$$

Solution: Iteration $i = 2$

2. Choose the lower guess a and upper guess b

$$a = 1.5, b = 1.75$$

3. Estimate the root

$$c = \frac{(a+b)}{2} = \frac{(1.5+1.75)}{2} = 1.625$$

4. Evaluate $f(a) * f(c)$ and $f(b) * f(c)$

$$f(a) = f(1.5) = 14.1014 > 0$$

$$f(b) = f(2) = -6.0204 < 0$$

$$f(c) = f(1.75) = -18.6809 < 0$$

So, $f(a) * f(c) < 0$

$$a^{new} = 1.5$$

$$b^{new} = 1.625$$

5. Calculate the estimation error, ϵ_a

$$\begin{aligned} \epsilon_a &= \frac{c^{new} - c^{old}}{c^{new}} \times 100 \\ &= \frac{1.625 - 1.75}{1.625} \times 100 \\ &= 7.6923\% \end{aligned}$$

In the table below we are going to calculate the values described in the logic diagram above

71)i	72)a	73)b	74)c	75)f(a)	76)f(b)	77)f(c)	78) ϵ_a
79)0	80)1	81)2	82)1.5	83)2.5574	84)-3.1850	85)14.10142	86)100%
87)1	88)1.5	89)2	90)1.75	91)14.1014	92)-3.1850	93)-6.0204	94)14.2852%
95)2	96)1.5	97)1.75	98)1.625	99)14.1014	100)-6.0204	101)-18.6809	102)7.6923%
103)3	104)1.5	105)1.625	106)1.5625	107)14.1014	108)-18.6809	109)120.4075	110)4%
111)4	112)1.5625	113)1.625	114)1.5938	115)120.4075	116)-18.6809	117)-43.6513	118)1.9639%
119)5	120)1.5625	121)1.5938	122)1.5781	123)120.4075	124)-43.7459	125)-137.0712	126)0.9949%
127)6	128)1.5625	129)1.5781	130)1.5703	131)120.4075	132)-136.6042	133)2014.6608	134)0.4967%
135)7	136)1.5703	137)1.5781	138)1.5742	139)2066.7146	140)-136.6042	141)-293.9475	142)0.2477%
143)8	144)1.5703	145)1.5742	146)1.5723	147)2066.7146	148)292.3379	149)-665.1822	150)0.1208%
151)9	152)1.5703	153)1.5723	154)1.5713	155)2066.7146	156)-680.7411	157)-1985.5568	158)0.0636%

At iteration ($i = 0$) we choose $a = 1$ and $b = 2$. After evaluating the function in both points we can see that $f(a)$ is positive while $f(b)$ is negative. This means that between these points, the plot of the function will cross the x-axis in a particular point, which is the root we need to find.

After 9 iterations the estimation error, ϵ_a is at the stopping criterion (0.0636%). This means that the value that approximates best the root of the function f is the last value of $c = 1.5713$.

```

1 clear;
2 function f = f(x)
3     f = tan(x) - (2^x) - 3;
4 endfunction
5
6 i = 0;
7 a = 1;
8 b = 2;
9 c = (a+b)/2;
10 TOL = 10^-3;
11 N = 100;
12 finalOutput = [1, a, b, c, f(a), f(b), f(c)];
13 while(i <= N),
14     c = (a+b)/2;
15     fC = f(c);
16     p = abs(b-a);
17     if(p < TOL | fC < TOL) then
18         root=c;
19         break;
20     else
21         finalOutput = [finalOutput; i, a, b, c, f(a), f(b), f(c)];
22     end
23
24     if(i==N)
25         disp("Method not converged after N-iterations")
26         break;
27     end
28
29     if(f(a)*f(c)<0)
30         b=c;
31     else
32         a=c;
33     end
34     i = i + 1;
35 end
36 disp(finalOutput)

```

Figure 1: Simulation 2(i) coding.

```

      column 1 to 5
0.   1.       2.       1.5       2.5574077
0.   1.       2.       1.5       2.5574077
1.   1.5     2.       1.75     14.10142
2.   1.5     1.75    1.625   14.10142
3.   1.5     1.625   1.5625  14.10142
4.   1.5625  1.625   1.59375 120.40751
5.   1.5625  1.59375 1.578125 120.40751
6.   1.5625  1.578125 1.5703125 120.40751
7.   1.5703125 1.578125 1.5742188 2066.7146
8.   1.5703125 1.5742188 1.5722656 2066.7146
9.   1.5703125 1.5722656 1.5712891 2066.7146
      column 6 to 7
-3.1850399  14.10142
-3.1850399  14.10142
-3.1850399 -6.0203799
-6.0203799 -18.680863
-18.680863  120.40751
-18.680863 -43.74586
-43.74586  -136.60415
-136.60415  2066.7146
-136.60415 -292.33793
-292.33793 -680.74108
-680.74108 -2029.628
->

```

Figure 2: Output Display Simulatio 2(i)

The diagram above shows the output that comes out in the scilab after writing the coding. According to the results that came out, there are no significant difference in terms of numbers when compared to the table. However, the result for iteration is correct where stop at the same iteration (iteration = 9). In this case the estimation error, ε_a is at the stopping criterion (0.0636%). The root of the function f is the last value of $c = 1.57129$. The last value of c in manual calculation almost same ($c=1.5173$).

Simulation 2(J)

$$\cos 2x + x - 1 = 0$$

Solution: Iteration $i = 0$

1. Rearrange the equation to be equal to zero,

$$f(x) = \cos 2x + x - 1 = 0$$

2. Choose the lower guess a and upper guess b

$$a = 0, b = 1$$

3. Estimate the root

$$c = \frac{(a+b)}{2} = \frac{(0+1)}{2} = 0.5$$

4. Evaluate $f(a) * f(c)$ and $f(b) * f(c)$

$$f(a) = f(0) = 0 > 0$$

$$f(b) = f(1) = -0.4161 < 0$$

$$f(c) = f(0.5) = 0.0403 > 0$$

So, $f(b)*f(c) < 0$

$$a^{new} = 0.5$$

$$b^{new} = 1$$

5. Calculate the estimation error, ε

$$\begin{aligned}\varepsilon_a &= \frac{c^{new} - c^{old}}{c^{new}} \times 100 \\ &= \frac{0.5 - 0}{0.5} \times 100 \\ &= 100\%\end{aligned}$$

Solution: Iteration $i = 1$

2. Choose the lower guess a and upper guess b

$$a = 0.5, b = 1$$

3. Estimate the root

$$c = \frac{(a+b)}{2} = \frac{(0.5+1)}{2} = 0.75$$

4. Evaluate $f(a) * f(c)$ and $f(b) * f(c)$

$$f(a) = f(0.5) = 0.0403 > 0$$

$$f(b) = f(1) = -0.4161 < 0$$

$$f(c) = f(0.75) = -0.1793 < 0$$

So, $f(b) * f(c) < 0$

$$a^{new} = 0.5$$

$$b^{new} = 0.75$$

5. Calculate the estimation error, ε

$$\begin{aligned}\varepsilon_a &= \frac{c^{new} - c^{old}}{c^{new}} \times 100 \\ &= \frac{0.75 - 0.5}{0.75} \times 100\end{aligned}$$

$$= 33.33\%$$

Solution: Iteration $i = 2$

2. Choose the lower guess a and upper guess b

$$a = 0.5, b = 0.75$$

3. Estimate the root

$$c = \frac{(a+b)}{2} = \frac{(0.5+0.75)}{2} = 0.625$$

4. Evaluate $f(a) * f(c)$ and $f(b) * f(c)$

$$f(a) = f(0.5) = 0.0403 > 0$$

$$f(b) = f(0.75) = -0.1793 < 0$$

$$f(c) = f(0.625) = -0.0597 < 0$$

So, $f(a) * f(c) < 0$

$$a^{new} = 0.5$$

$$b^{new} = 0.625$$

5. Calculate the estimation error, ε

$$\begin{aligned} \varepsilon_a &= \frac{c^{new} - c^{old}}{c^{new}} \times 100 \\ &= \frac{0.625 - 0.75}{0.625} \times 100 \\ &= 20\% \end{aligned}$$

In the table below we are going to calculate the values described in the logic diagram above

71) i	72) a	73) b	74) c	75) $f(a)$	76) $f(b)$	77) $f(c)$	78) ε_a
79)0	80)0	81)1	82)0.5	83)0	84)-0.461	85)0.0403	86)-
87)1	88)0.5	89)1	90)0.75	91)0.0403	92)-0.461	93)-0.1793	94)33.33%
95)2	96)0.5	97)0.75	98)0.625	99)0.0403	100)-0.1793	101)-0.0597	102)20%
103)3	104)0.5	105)0.625	106)0.5625	107)0.0403	108)-0.0597	109)-0.0063	110)11.11%
111)4	112)0.5	113)0.5625	114)0.5313	115)0.0403	116)-0.0063	117)0.0179	118)5.872%
119)5	120)0.5313	121)0.5625	122)0.5469	123)0.0180	124)-0.0063	125)0.0060	126)2.85%
127)6	128)0.5469	129)0.5625	130)0.5547	131)0.0063	132)-0.0063	133)-0.0001	

At iteration ($i = 0$) we choose $a = 0$ and $b = 1$. After evaluating the function in both points we can see that $f(a)$ is positive while $f(b)$ is negative. This means that between

these points, the plot of the function will cross the x-axis in a particular point, which is the root we need to find.

After 5 iterations the value of $f(c)$ is less than our defined tolerance ($0.0060 < 0.01$). This means that the value that approximates best the root of the function f is the last value of $c = 0.5469$

```

1 clc;clear;
1 function f = f(x)
2 f = cos(2*x)+x-1
3 endfunction
4
5
6 i = 0
7 a = 0
8 b = 1
9 c = (a+b)/2
10 TOL = 10^-3
11 N = 100
12 finalOutput = [i, a, b, c, f(a), f(b), f(c)]
13 while(i <= N),
14     c = (a+b)/2;
15     FC = abs(f(c));
16     p = abs(b-a);
17     if(p < TOL | FC < TOL) then
18         root=c;
19         break
20     else
21         finalOutput = [finalOutput; i, a, b, c, f(a), f(b), f(c)]
22     end
23
24     if(i==N)
25         disp("Method not converged after N iterations")
26         break
27     end
28
29     if (f(a)*f(c)<0)
30         b=c;
31     else
32         a=c;
33     end
34     i = i + 1
35 end
36 disp(finalOutput)

```

Figure 1: Simulation 2 (j) coding

```

column 1 to 6
0. 0. 1. 0.5 0. -0.4161468
0. 0. 1. 0.5 0. -0.4161468
1. 0.5 1. 0.75 0.0403023 -0.4161468
2. 0.5 0.75 0.625 0.0403023 -0.1792628
3. 0.5 0.625 0.5625 0.0403023 -0.0596776
4. 0.5 0.5625 0.53125 0.0403023 -0.0063235
5. 0.53125 0.5625 0.546875 0.0179397 -0.0063235
column 7
0.0403023
0.0403023
-0.1792628
-0.0596776
-0.0063235
0.0179397
0.0060323
-->

```

Figure 2: Output display

The diagram above shows the output that comes out in the scilab after writing the coding. According to the results that came out, there are also no significant difference

in terms of numbers when compared to the table. However, the result for iteration is correct where stop at the same iteration (iteration = 5). In this case, $f(c)$ is less than our defined tolerance. The root of the function f is the last value of $c = 0.5469$. Meanwhile, the last value of c in manual calculation ($c=0.5547$).

Simulation 4(a)

$$a) \quad x^3 - x - 1 = 0 \qquad 1 \leq x \leq 2$$

71)i	72)a	73)b	74)c	75)f(a)	76)f(b)	77)f(c)	78) ϵ_a
79)0	80)1.000	81)2.000	82)1.167	83)- 1.000	84)5.000	85)- 0.578	86)-
87)1	88)1.167	89)2.000	90)1.253	91)- 0.578	92)5.000	93)- 0.286	94)6.864
95)2	96)1.253	97)2.000	98)1.293	99)- 0.286	100)5.000	101)- 0.131	102)3.094
103)3	104)1.293	105)2.000	106)1.311	107)-0.131	108)5.000	109)- 0.058	110)1.373
111)4	112)1.311	113)2.000	114)1.319	115)- 0.058	116)5.000	117)- 0.024	118)0.607
119)5	120)1.319	121)2.000	122)1.322	123)- 0.024	124)5.000	125)- 0.012	126)0.227
127)6	128)1.322	129)2.000	130)1.324	131)-0.012	132)5.000	133)- 0.003	134)0.151
135)7	136)1.324	137)2.000	138)1.324	139)- 0.003	140)5.000	141)- 0.003	142)0.000

Steps : From $i = 0$

1. Rearrange the equation to be equal to zero, $f(x) = 0$

$$f(x) = x^3 - x - 1 = 0$$

2. Choose the lower guess a and upper guess b

$$a=1, b=2$$

3. Find the value $f(a)$ and $f(b)$ by substitute the value 1 and 2 with the equation in step 1 and then we get $f(a) = -1.000$ and $f(b)=5.000$

4. Estimate the root, $c = \frac{af(b)-bf(a)}{f(b)-f(a)}$, and the value is 1.167

5. Evaluate $f(a) \times f(c)$ and $f(b) \times f(c)$ and we get that product from $f(a) \cdot f(c)$ is positive and $f(b) \cdot f(c)$ is negative. So we must take the negative value.

6. And a^{new} for which is for next iteration is $c^{last iteration}$

7. Repeat steps 1 to steps 6 and finally we get the root, $c = 1.324$ at $i = 7$

Simulation 4 (b)

$$b) \quad x - 2^{-x} = 0 \qquad 0 \leq x \leq 1$$

71)i	72)a	73)b	74)c	75)f(a)	76)f(b)	77)f(c)	78) ϵ_a
79)0	80)0.000	81)1.000	82)0.667	83)- 1.000	84)0.500	85)0.037	86)-
87)1	88)0.000	89)0.667	90)0.643	91)- 1.000	92)0.037	93)0.003	94)- 3.733
95)2	96)0.000	97)0.643	98)0.641	99)- 1.000	100)0.003	101)0.000	102)- 0.312

Steps: From $i = 0$

1. Rearrange the equation to be equal to zero, $f(x) = 0$

$$f(x) = x - 2^{-x} = 0$$

2. Choose the lower guess a and upper guess b
 $a=0, b=1$
3. Find the value $f(a)$ and $f(b)$ by substitute the value 0 and 1 with the equation in step 1 and then we get $f(a) = -1.000$ and $f(b)=0.500$
4. Estimate the root, $c = \frac{af(b)-bf(a)}{f(b)-f(a)}$, and the value is 0.667
5. Evaluate $f(a) \times f(c)$ and $f(b) \times f(c)$ and we get that product from $f(a) \cdot f(c)$ is negative and $f(b) \cdot f(c)$ is positive. So we must take the negative value.
6. And b^{new} for which is for next iteration is $c^{last\ iteration}$
7. Repeat steps 1 to steps 6 and finally we get the root, $c = 0.641$ at $i = 2$

CONCLUSION

In conclusion, Numerical methods can be expressly presented by using the open-source computational programming such Scilab. The entire algorithm in Numerical calculation is very useful for engineering and scientist to explore the solution which is involved with mathematical model. Graphical method is the easiest way to find the root of an equation. It's simply by plotting several coordinates on the graph until the line intercept with x-axis. However, this method is not very precise as we can completely define where actually the line intercept with x-axis because in graph, the decimal is limited and it only provide an rough approximation of the root

We also use bisection method to find the root. Bisection method is the safest and it converges. The bisection method is the simplest of all other methods and is guaranteed to converge for a continuous function. Besides, false position method is same like as bisection method but the difference is only at formula to get c unless the other steps are totally same. So if we learn numerical subject, we surely can find the root of function that had been given and do the false position method to get answer same like we do analytical method

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THE RELATIONSHIP BETWEEN SUCCESSORS' ATTRIBUTES AND FAMILY FIRM PERFORMANCE IN THE ISLAMIC AND LEGAL PERSPECTIVES

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Abstract

Studies relating to the relationship between the successor's attributes and family firm performance are lacking behind, specifically from the Islamic and legal perspectives. Thus, this conceptual study aims to find the succession planning attributes (specifically the successor's characteristics) from the said perspectives, which can add value to family firm performance. This study uses a qualitative method through document analysis of relevant library-based materials.

Keywords: Successor attributes, family firm, performance

INTRODUCTION

Family firms make up more than 60% of all European firms, encompassing a vast range of firms of different sizes and from different sectors (Cucculelli 2012). Meanwhile, in the United States, family firms employ almost two-thirds of all US employees with similar or higher percentages of employment by family firms in other countries (LeCounte, 2022). Family firms in Asian countries form the strength of their local economic systems (Claessens et al.2000; Tam, & Tan 2007). Similar to their counterparts in other countries, family firms in Malaysia also contributed to the national economic wealth and societal development. Some examples of well-known family firms in Malaysia are Berjaya Group, Sapura Group, Genting Group, and YTL Group. According to Asian Family Business Report 2011 (Fan et al. 2011), total market capitalization of family business in Malaysia in 2010 accounted for nearly 67% of the normal GDP growth and accounted for 62% of listed entities.

Family firms is defined by two main measurements: ownership and control and involvement of family members in business decision making. These two criteria were used by previous studies (Ervina Alfani 2013; Kim, & Gao 2013). Meanwhile, according to Asri et al. (2022), family firms are fully owned and managed by founding family, with intention to transfer ownership to their descendants.

The importance of family cannot be understated because these firms play a significant role in economic growth. In the light of their contribution, there arises a need to ensure that the performance of the family firms should be maintained and sustained from one generation to another generation. One of the mechanisms to ensure family firms remain competitive in the market is by adopting good corporate

governance (Noor Afza & Ayoib 2011) for long-term success (Blumentritt, 2006). According to the Arosa et al. (2010), board of directors plays an important role in the firms. The functions of board of directors such as control the business operations, providing advice and act as a forum for conflict resolution (Collin and Ahlberg 2012). Normally, the boards in family firms are dominated by family members (Barontini & Bozzi, 2011; Collin & Ahlberg, 2012; Ervina Alfian, 2013). According to Fitz-Koch and Nordqvist (2017), family ownership and family involvement influence succession, succession planning and success of family firms. A number of scholars state that a good succession planning ensures continuity of business, sustainability and added value in business (Garg, & Weele 2012; Mohd Asri et al. 2011; Lucky et al. ,2011); increase in knowledge capital (Rothwell 2001); and stakeholders' cooperation (Morris et al. 1997; Sharma et al. 2001). Meanwhile, the lack of succession planning processes is a leading cause of family-owned SMEs' mortality (Villegas, Jiménez, & Hernández, 2019).

Islam motivates Muslims to be entrepreneurs and at the same time obliges them to work hard and gain *halal* earnings beyond their immediate needs to care of their community and the ummah at large. According to Saleem (2019), human has the natural desire to maintain and protect their wealth and transfer it to their children. Wealth management and succession planning are discussed in Quran Surah al-Kahf (surah no.18). Saleem (2019), in his study, referred to the Quranic verse of al-Kahf and a Hadith (narrated by Bukhari), and stated that there Muslims' wealth must be managed with a proper plan. Parents may prepare a succession plan, where their wealth earned could be transferred to children in the safest possible way, to make sure their children live in a better state rather leaving them to beg form others .Thus, two essential elements to make sure sustainability of the family firms are board of directors and succession planning.

Studies relating to the relationship between the successor's attributes and family firm performance are lacking behind, specifically from the Islamic perspectives. Thus, the objective of this conceptual study is to find out the succession planning attributes (specifically the successor's characteristics) from both perspectives Islam and legal, which can add value to family firm performance. This study uses a qualitative method through document analysis of relevant library-based materials. Document analysis involves a method of evaluating documents systematically from printed and electronic sources where data obtained will be analyzed and interpreted.

DISCUSSION

Succession Planning

Succession planning refers to the process of developing a business strategy that provides prescriptions about how business generational transition can be operationalised effectively (Wang, Watkins, Harris, & Spicer, 2004). Succession

planning also relates to the effort to prepare the successor of a business by referring it as “a structured process involving the identification and preparation of a potential successor to assume a new role” (Garman & Glawe, 2004). On the other hand, Ip & Jacobs (2006) stated that succession planning covers matters such as transfer procedures, legal and financial issues, psychology factors, leadership enrichment and exit strategies.

Since mentoring children as potential successors has become increasingly challenging (Noor Afza, & Ayoib 2010), many scholars opine that successors must be fit and capable managers (Wang et al., 2004), well-groomed and well-developed in terms of education, training and motivation (Nor Aishah et al. 2013). In addition, Handler (1990) stated that the success of a family business succession depends largely on the kind of training received, obligation, experience outside the organization, communication of relevant succession and succession planning. Thus, the successor is expected to possess certain essential skills which can be used in running the family business. These skills are decision making skills, successor’s commitment to the business, interpersonal skills, problem solving skills, business and operation skills (Mohd Asri et al. 2011; Motwani et al. 2006).

Based on the above literature review, it is assumed that the successor’s attributes are a part of the succession planning process. Thus, this study will look at the succession planning attributes (Succession Planning) which include successor gender, education and training which based on Islamic Perspective and also from legal perspective.

Successor’s Gender

The ability of women to become leaders has always been the main question questioned by various groups. A choice of gender’s successor among the family firms has also become an interesting topic to discuss and to investigate because most of the findings of the studies found that male managers or successors perform better compared to female managers (Inmyxai, & Takahashi 2009; Lerner, & Malach-Pines 2011). Male firms are claimed gained more revenue (Danes et al. 2007) grow faster (Kalleberg & Leicht,1991) and low of survival and sustainability (Menzier et al., 2006) compared to female firms. The successful of the male firms because they have more use better strategies and approaches in running businesses which lead to better performance (Inmyxai, & Takahashi 2009).

In contrast, some studies claimed that female successors are comparatively better than male successors. Female successors are more supportive in the working environment (Noor Afza, & Ayoib 2010), good in social and interpersonal skills (Noraini, & Ahmad Najmi 2009) and take less risk compared to men (Sexton & Bowman-Upton, 1990). They are better understanding of family business (Hollander & Bukowitz, 1990), thus enabling them to contribute and lead effectively in either

family matters or business activities (Cole, 1997; Dumas, 1998) and consequently have the ability to achieve the firms objectives (Noor Afza, & Ayoib 2010). According to Danes et al. (2007) revealed that female managers, in contrast to their male counterparts, are found to demonstrate the liking to include other family members in running the business and allocate less sleeping time and this consequently enhance the firm revenue.

Islam treats female and male equally in getting the rights of social, economics and politics (Elius, 2012). It is stated in Surah An Nisa verse 124; “But those who do good—whether male or female—and have faith will enter Paradise and will never be wronged ‘even as much as’ the speck on a date stone”. According to Elius, (2012), Islam has clarified the legal rights and obligations of both men and women in such a balanced way that women cannot criticize about their vulnerability or subservience and men cannot claim their dominance over women. Therefore, it can be concluded that Islam permits involvement of females in economics activities and be involved in the management of family business. Females can be nominated as a successor of family firms. The chosen successor either male or female apparently can increase the firm performance.

Business performance has been differently described by researchers. According to Hartman et al. (2011), business performance is defined in two ways; revenue generated and longevity of the family business (Hartman et al., 2011). Meanwhile, Venkatraman and Ramanujam (1986) argued that a firm's performance can be categorized into two methods, notably financial performances and non-financial performance. Meanwhile, from Islamic Perspective, performance of the family firm is just not measured by the material measurement but also the hereafter. The pursuit of wealth is subject to moral and ethical standard as guided by the criteria of Halal (permissible) and *Haram* (prohibited). Muslim successors should not only avoid illegitimate means in carrying out their duties and earning their livelihood but also stay away from matters that are doubtful. Allah has mentioned in the Quran in Surah Al-Baqarah, verse 275 “But Allah has permitted trade and forbidden usury”.

Therefore, it is important as a successor adheres to the teaching of Islam, as a caliph of Allah in managing and running family business. Successor who is potential as a future leader of the family firms must has a certain Islamic leadership value. The Quran lays the basic principle of leadership as stated in Surah Al-Hujurat verse 13 “The most honorable among you in the sight of God is the one who is most God-conscious”. According to Ahmad (2012), Islam lays special emphasis on the character of a leader, such as justice (‘adl), trust (amanah), bashfulness (haya), patience (sabr), thankfulness (shukr), sincerity (ikhlas), mercy (rahmah), trust (tawakkul). At the same time, as a potential leader, a successor must be free from the moral disease such as falsehood (kidhb), backbiting (ghibah), envy (hasad), and insincerity (riya) (Ahmad 2012).

Based on above literature, it can be concluded that, from the Islamic view, a successor is not gender-based. Succession is based on the ability of fulfilling Islamic leadership values which are needed for enhancing firm performance, and in seeking the pleasure of Allah SWT.

Successor Education, Knowledge, and Wisdom

The level of education affects the ability of a person, especially one who is holding an important position in an organization and is required to make sound decision. The holding of any position by a person in an organisation requires him to acquire certain skills and abilities in order to perform the task expected of him in his position in an effective manner (Larcker & Saslow, 2014). Likewise, a successor who is well-educated and knowledgeable may perform better than one who is uneducated and unknowledgeable (Noor Afzan, & Ayoib 2010). Thus, an educated successor has the prospect of ensuring sustainability of family firms (Noor Afzan, & Ayoib 2010). Nowadays, education in various kinds of fields can be gained from a formal education system. According to Danneels (2008), a formal education “can accumulate the ‘absorptive capacity’ of managers such as confidence, psychology, knowledge and skill”. Thus, the education gained through formal education can be applied effectively in the conduct of business matters (Sardeshmukh & Corbett, 2011).

The Prophet Muhammad (SAW) emphasized the need for all Muslims to be engaged in learning and to seek knowledge as far they could reach. Al-Qur’an Surah Al-Kahfi, verse 40, explains that and ‘remember’ when Moses said to his young assistant, “I will never give up until I reach the junction of the two seas, even if I travel for ages”. Musa (PBUH) embarked upon a difficult and arduous journey to find the more knowledgeable person, Al-Khidr as expounded detail in Surah Al-Kahf. Successors also must be lifelong learners to enhance their competencies and capabilities in running family firms. It is clearly stated by Prophet Muhammad (SAW) “Seek knowledge from the cradle to the grave”.

According to Jabnoun (2012), a leader must acquire knowledge and wisdom in their area of leadership and has specialised knowledge in order to make informed judgements. The Quran states that, “...and Allah blessed Dawud with kingship and wisdom and taught him (knowledge) what He willed”. Therefore, as successors, they need to strive to gain and utilise information and knowledge and apply his knowledge into fruitful action towards articulated goal or mission.

Successor Training

Besides formal education, a successor needs training in order to acquire necessary skills which should form a part of succession planning (Garg & Weele, 2012). Training is process through experiences offered to successors to absorb some new perspective, understanding, value, technique, or skill. Such necessary skills must equipped him with the following outcomes; namely the ability to operate business effectively (Larcker & Saslow, 2014), deeply motivated and committed (Nor Aishah et al. 2013),

and the ability to work efficiently for the job he or she is holding (Garg & Weele, 2012; Wang et al., 2004). With proper training, a successor can gain confidence to lead his or her family firm and maintain its survival (Garg & Weele, 2012; Noraini Ismail & Ahmad Najmi Mahfodz, 2009; Wang et al., 2004). Based on these explanations, training is one of an important element to enhance the skills.

Meanwhile, according to Randeree (2012), a quality leader is one who seeks knowledge, possesses wisdom and exercises responsibility. All these attributes can be achieved through the right training and preparation from an early stage. The Quran states in Surah An-Nahl verse 78 that “And Allah brought you out of the wombs of your mothers while you knew nothing, and gave you hearing, sight, and intellect so perhaps you would be thankful”. Allah created human without any knowledge, but Allah equipped them with necessary tools of learning and training (Jabnoun, 2012). In Islam, the goal of training is to make individuals aware of their status as vicegerents and servants of Allah (SWT), which develop skills and right attitude (Jabnoun, 2012). The right attitude is based on Prophet Muhammad (SAW) did is build a strong aqeedah (belief in Almighty). According to Al Quran, the professional attitude of public administrators should obtain is *makin* (strong professional – mentally and professionally talented), *alim* (skilful and professional), *amin* (trustworthy), *hafiz* (integrity) (Kamaruzaman & Hashi, 2012).

Therefore, every family firms should provide an extensive period of training of both intellectual and technical aspects to their successors, and to make sure these successors can be skilful (*alim*) and demonstrate professionalism (*makin*) before taking over the family firms management.

Legal perspective of Successor

From the legal perspective, a successor in the capacity of a director must be at least 18 years of age and above. Other conditions are that a successor is (1) not a bankrupt, (2) not convicted of an offence, (3) not restrained by the court from being a director, (4) not unsound mind, and (5) not prohibited by the constitution of the company.

Notwithstanding the above, there is no legal requirement for a successor to have any specific academic or professional qualification.

CONCLUSION

In order to maintain growth and continuity, family firms are similar to non-family firms in terms of relying on a proper succession planning. Succession planning provides family firms with a systematic plan for developing an intergenerational leadership pipeline. It is proved that board of directors which consists of family members can influence of the determination of successor. The characteristics of successor is vital because he/she may influence of the sustainability of family firms. Many of previous studies examined the attributes of successors such as gender,

education and training influence family firm performance. This study looks at using all these attributes (gender, education and training) from Islamic Perspective. In terms of gender, there are mixed results either male or female successor influence firm performance. Meanwhile, education and training, both are important elements for potential successors to equipped them with the knowledge and skills.

Meanwhile, in the Islamic System, both male and female are treated fairly and equally as long the chosen successor is *makin* (strong professional – mentally and professionally talented), *alim* (skilful and professional), *amin* (trustworthy), *hafiz* (integrity). These attributes are essential for a potential leader to lead family firms to achieve the firms objectives and also vision of Muslims is in the hereafter.

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E-HOSPITALITY AND SERVICE QUALITY: A STUDY ON MALAYSIA'S HOTEL WEBSITE

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Abstract

The emergence of e-commerce through Information and Communication Technology (ICT) development is among important strategic forces that would transform Malaysia to a knowledge based economy especially in tourism and hospitality industry. Therefore, it is important to understand the dynamics of the e-commerce especially on online service encounter and how the value of the service can be developed in the cyber environment. The interactive relationship with the client and the service provider is the critical moment to make consumers "commit" to a web site. Therefore, this study intends to investigate the relationship of e-Hospitality elements and E-S-Qual on attitude toward website and the mediating effects of flow. The result shows that attitude toward website was explained by both e-Hospitality and E-S-Qual and enhanced through the flow. However, the research is without a limitation. First, the experience with the hotel website among the respondents was not tested a priori; second, the measurement was tested specifically on Malaysia hotel website; thirdly, the variability of respondent demographic; and finally, the limitations of the convenience sampling process that affect the generalisability of the results.

Keywords: E-Hospitality, E-S-Qual, Service Quality, Consumer Attitude, Flow, Tourism

INTRODUCTION

Information and communication technology (ICT) development was among important strategic forces that would transform Malaysia to a knowledge based economy. As of January 2020, 83.1% (27 million) of the population subscribed to internet. This is a stark escalation from June 2009, where only 65.7% of the population (15.7 million) subscribed to internet (according to the official portal of Ministry of Science, Technology and Innovation). The adoption of internet among Malaysia was increasing due to strong government intervention with specific attention to the use of "e-dagang", Multimedia Super Corridor (MSC) as well as National Broadband Policy under the Ninth Malaysia Plan.

The adoption of e-commerce (in the early 2000s) and now the emergence of media richness of tourism content such as the application of using virtual reality and

metaverse also significantly increased perceived usefulness and perceived enjoyment for online content for the tourism and hospitality industry in Malaysia (Un-Kon, 2022). The importance of e-commerce in particularly for hotelier embodied in Malaysian Association of Hoteliers (MAHA) statement that “online distribution cuts costs, attracts affluent customers and lessens the dependency on more traditional and expensive channels”. MAHA also collaborate with Fastbooking Internet Booking Engine Providers to initiate e-commerce together with hotels own booking engine.

According to Saha et. al (2022), intention to purchase is enhanced by customer satisfaction and shopping experiences and that satisfaction plays a mediating role in these relationships. Rowley (2006) also suggested that e-service experience does not limit solely on purchase. Since information is the primary value between service provider and customers, e-service also mean “information service” thus point to both search and information retrieval for the information content of web sites have a role to play in consumer evaluation of service quality.

Kimiloğlu (2004) urged the important to understand the dynamics of the online service encounter and how the value of the service can be developed in the cyber environment just like it is done in the real world of marketing or “as parallel as self service” (Rowley, 2006) or as similar as “the moment of truth that similar to physical encounters” (Jones, Spence, & Vallaster, 2008). Hofacker and Murphy (2009) suggested that the more interactive relationship with the client and the service provider, the higher the chances of converting that client into a buyer. Thus the critical moment is to make consumers “commit” to a web site.

As suggested by Jones, Spence, and Vallaster (2008) service provider may; through online generate emotional reactions to the web experiences during online interaction and control content of the websites. Thus, the evokes emotion concepts also alligned with hospitality concept as “consideration of concepts such as generosity, friendliness, the host–guest relationship, entertainment, and experiences friendliness, the host–guest” (Hemmington, 2007), and as “free and friendly space – creating physical, emotional and spiritual space for the stranger” (Lashley, 2008).

This study examines the relationship of e-Hospitality elements and E-S-Qual on attitude toward website and the mediating effects of flow. It proposed that e-hospitality elements will strengthen the explanatory power of E-S-Qual on attitude toward website. This is enhanced through the medating effects of flow. An engaging website that have “hospitality elements” will leverage the customer attitude on websites beside the functional factors of sytems availability and efficiency.

Therefore, the study seeks to identify the elements of “e-Hospitality” and its relative important with e-service quality to determine their effect on attitude toward websites and to find the intervening effect of flows between the e-service quality and e-Hospitality with attitude toward website.

E-Commerce and Hospitality

Information and Communication Technologies (ICT) crucially impact on travellers' knowledge, attitudes and behaviour. The increased online price/product transparency and the new e-business models (e.g. online auctions) enhance tourists' purchasing power, who is becoming more price sensitive, less brand loyal, more sophisticated and experience seekers.

The Internet has become a new channel for the commercialization of products conventionally sold through traditional outlets. Electronic commerce (e-commerce) requires little additional investment by companies (a website is sufficient) and facilitates access to markets previously considered as out of reach. Many companies have been built upon an exclusively electronic system of sales and, unlike the offline market, have employed a weak e-business strategy. This has led to serious tactical errors which have caused many firms to fail (Phan, Chen, & Ahmad, 2005).

Using the Internet as a reservation method can benefit the hospitality firms and also the customers by reducing costs and providing real-time information to both parties. According to Cobanoglu (2001), business travellers still use travel agents as their favourite hotel reservation resource followed by toll free reservation numbers, and then calling the hotel directly. Use of online hotel reservation system follows the previous three media in terms of favour.

However, experts in IT predict that within several years the Internet will be one of the most important sources for hotel reservations and services (Cline & Warner, 2001). The number of online hotel reservations in 2001 accounted for 4.9% of total reservations made, and this percentage is expected to more than triple over the next 3 years. While the proportion of online reservations is increasing, only 64% of hospitality firms currently handle such transactions (Cline and Warner, 2001). Because an explosive increase in the number of online hotel reservations is expected, hotel marketers need to understand the determinants of customers' online hotel reservation intentions.

E-Service Quality

As proposed by Sahadev and Purani (2008), "origin of e-service quality as a concept that can be traced from the concept of service quality". The e-service quality does differ between "website quality" in sense that e-service quality are measuring the online interaction (Smith & Eroglu, 2009). Website service quality consists of the technological aspects of websites such as appearance and layout and also services aspects such as response time and personalized service (Zhou et. al, 2009).

Smith and Eroglu (2009) as an example, measured the interaction using an off-site customer service (OCS) scale is comprised of usability and experiential dimensions, with the usability dimension consisting of items capturing ease of use,

error recovery, security, and customization and the experiential dimension consisting of items capturing satisfaction, socialization, empathy, and privacy sensitivity.

Eventhough, e-service quality had been explored by many researcher (Smith & Eroglu, 2009) with variability of dimensions (Juran and Gryna, 1970; Loiacono, Watson, and Goodhue, 2000; Szymanski and Hise, 2000; Yoo and Donthu, 2001; Barnes and Vidgen, 2001; 2002; Wolfinbarger and Gilly, 2003; Zafiropoulos & Vrana, 2006; Bauer, Falk & Hammerschmidt, 2006) there are no well accepted of conceptual definitions and models of service quality and its measurement (Seth, Deshmukh, & Vrat, 2005).

Parasuraman, Zeithaml and Malhotra (2005) suggested that future researcher to integrate E-S-Qual dimensions with other hedonic benefits such as fun, enjoyment or pleasure. It was cleared that “experiential aspects such as fun or pleasure do not fall within the conceptual domain of service quality because such hedonic aspects are distinct benefits that may not be relevant in all contexts or to all customers”.

It is this research intends to fill in the gap to explore the flow state to explain the consumer attitude beside E-S-Qual and e-Hospitality. It is also our attempt to modify the E-S-Qual to suit with information search behaviour of future customer/traveller that focused on only two dimensions; system availability and efficiency based on (Jang, 2004) that proposed more research needed to understand online information search behaviours.

E-Hospitality

It is widely accepted that the Internet can serve as an effective marketing tool in tourism (Buhalis & Law, 2008). It is a valuable tool for both suppliers and consumers for information dissemination, communication, and online purchasing. Businesses, including customer-oriented and information-intensive tourism enterprises, are increasingly adopting e-business models to achieve their organizational goals.

Maintaining an effective website has thus become vital for a business to strengthen its customer relationships and gain a larger market segment. In the context of tourism, Jang (2004) stated that online information search will become a major trend among travellers; with online reservations for travel products and services becoming an important application (Law & Hsu, 2006). Tourism has illustrated how the Internet can change the structure of an entire industry and create new business opportunities (Berger 2006).

Furthermore, it is a quite unique area of business because products and services cannot be reviewed directly prior to purchase. Instead, customers have to rely on indirect or virtual experiences. The virtualization of tourism is proceeding at a rapid

pace and been an important success factor in the industry. It is therefore essential that tourism websites devote enough attention to the presentation of information.

However, meeting those requirements and becoming successful in these new environments represents a great challenge for tourism organizations, particularly because the dynamism of the industry. Pertaining to that, to face this great challenge, tourism website should not be limited as marketing tool for the company, but should be treated strategically and been design as part of the entire hospitable experience of the tourism products or services.

Each hospitality transaction will contribute to the total meanings associated with the tourism experience (Lynch, 2005) including the tourism website. Therefore, a key to success to the tourism websites in this postmodern society is “how hospitable the website” to the guest. Therefore, the tourism industry has to adapt its web presences in order to improve their business value and to meet the customers’ needs.

This means that tourism websites should integrate user generated content, as well as functionalities and emotions which contribute to their total tourism experience. The retention of a guest perspective is essential to the effective delivery of hospitality products; customers do not buy service delivery, they buy experiences; and they do not buy service quality, they buy memories. Therefore, the tourism delivery process should start from the beginning process of interaction where web site plays a critical role in providing the hospitable experience to the guest.

The hospitable websites possess unique characteristics that affect the likelihood of generating emotional reactions and functional performance to the web experience. The emotion-causing antecedents elucidated are the website’s vividness, interactivity, challenge, interaction speed, machine memory, and allowable social interactions (Jones et. al, 2008). Depending on how a website performs on these dimensions, positive or negative emotions may result. Regardless of the valence of the resultant emotion, the feelings generated may attach to the website as initial stage of guest interaction (initial positive emotions to the company).

Through a better understanding of the provision of hospitality and acts of hospitableness, tourism hosts are better able to recognise the emotional experiences involved and ensure that organisation focuses on their entire tourism process or products. Successful hosts are able to engage customers on an emotional and personal level, which creates feelings of friendship and loyalty amongst guests (Telfer, 2000). Hence, this research contributes to current literature by define hospitality in online context or “e-Hospitality” constructs.

The Flow State

Despite the existence of different experience typologies, it is the flow of experience with its idea of total immersion or plunge which has most attracted marketing researchers, in particular those working on consumer behaviour, who (Arnould & Price, 1993) have compared it to the peak experience conceptualised by Maslow (1964) in the 1960's with reference to religious ecstasy.

From Hoffman and Novak (1996), it stated original definition of flow as the "holistic sensation that people feel when they act with total involvement." When a person in the flow state "they become absorbed in their activity" Csikszentmihalyi, 1975 in Hoffman and Novak, (1996) flow is characterized by; focused attention, complete involvement and intrinsically enjoyable experience. However, the attempt to measure the flow construct was done by Hoffman and Novak (1996) in computer-mediated environment (CME) as "the state occurring during network navigation" and significant to consumer learning "that leads to more informed decisions, whereas flow resulting from experiential behaviors leads to greater recall and word-of-mouth activities".

This state of flow or flow is perhaps not that rare in the context of computer games or internet-surfing, but all kinds of interaction involving a digital device could perhaps allow flow to occur. There has been some research on a variety of issues related to information technologies that has made use of the flow construct as defined by Csikszentmihalyi (Hoffman & Novak, 1996).

Chen et al. (2002) have done research on flow experiences occurring while using the World Wide Web while Finneran and Zhang (2002) have studied flow experiences in computer-mediated environments. Ghani and Deshpande (1994) studied the structure of flow experiences in information technology usage. Koufaris (2002) has compared several models including the flow model to map on line consumer behaviour. Woszczyński et al. (2002) state, that the flow model would be a good account of playful actions with computers.

All these findings approach the issue of flow and information technology use from different viewpoints, but they all seem to support the hypothesis that flow experiences do occur in information technology use. Chen et al. (2002) even conclude that the World Wide Web would be especially suited for flow experiences. Also, Chen (2006) found that most World-Wide Web users experience positive moods while online. In addition, Wan and Chiou (2006) have argued that the interactive and engaging properties of online games offer users the opportunity for flow experiences.

Flow is therefore a state of consciousness (usually characterised by a loss of a sense of time passing) that is sometimes experienced by individuals who are deeply involved in an activity they are enjoying. Flow is most often experienced by

individuals as pleasure, satisfaction and as playfulness (Webster, Trevino, & Ryan 1993). Chen et al. (1999) found that some of the most flow-inducing activities were information retrieval, reading and writing emails, creating web pages, playing online games, and chatting online.

In summary, flow is conceptualized as an intrinsically enjoyable experience, and is operationalized as the enjoyment or the intrinsic interest of human-computer interactions. We directly measured flow in the present study with enjoyment and time distortion. The intervening effects of the flow construct will be explored to predict the attitude toward websites.

Attitude Toward Website

In recent years, web sites have become a common marketing communication tool, but both practitioners and academic researchers still struggle to measure the effectiveness of these new tools. Attitude toward the Web site is an important measure of Web site effectiveness.

Factors influencing online shopping intention and attitude toward online shopping have been researched and documented in the context of traditional consumer literature. A review of empirical studies in this area shows that the theories of Reasoned Action (Ajzen & Fishbein, 1975). According to Fishbein (1975), attitudes toward an object are generally viewed as a function of an individual's beliefs about the object and the evaluative responses associated with these beliefs.

Advertising researchers also found empirical evidence regarding attitude towards website as a measure of the audience's affective response has been employed to assess the effectiveness of Web sites. Some researchers have borrowed from traditional measures of attitude to measure attitude toward the Web site because of the absence of scales designed specifically to measure the effectiveness of Web sites.

Chen and Wells (1999) argued that a new scale is needed for this new medium and they developed a scale to measure attitude toward the Web site. The Chen and Wells scale was developed primarily from the input of experienced Web users. Based on previous research on the development of the advertisement scale, this measure seems to be a good starting point for understanding the effectiveness of Web sites and is thus central to the current study.

According to Elliott (2005), attitude to the retail web site is an indicator of retail web site effectiveness. Several studies suggest that it is positively related to attitude toward the brand and purchase intent, shopping likelihood and site loyalty (Donthu 2001 in Elliott (2005), brand belief strength and confidence in brand belief (Bellman and Rossiter 2004 in Elliott, 2005).

According to this research also, attitude toward a retail web site is as the dependent variable. The consumer attitude toward a retail web site is favourably strengthened by the six web site characteristics (e.g., ease of use, product information, entertainment, trust, customer support, and currency). In addition, the relationship between the web site characteristics and attitude toward the retail web site is moderated by product involvement and online shopping experience.

Huang (2005) suggested that attitude refers to an individual's overall evaluation of online shopping as a way of shopping, which can be positive or favourable, negative or unfavourable. Three aspects used to measure attitude such as the hedonic aspect could be measured by items of fun or frustrating, enjoyable or not enjoyable, and interesting or boring, while the utilitarian aspect could be measured by items such as safe or risk, ordered or chaotic, wise or foolish, and reliable or unreliable and the overall aspect could be measured by items such as useful or useless, pleasant or unpleasant, entertaining or weary, and nice or awful.

According to Heath and Gaeth (1994) in Wu (1999), there are literally hundreds of definitions for the term attitude. Attitude has become an everlasting interest of study for social scientists. The digital world in which we are is no exception gives a state-of-the-art summary of definitions and example measures of key constructs associated with attitude. However, they do not elaborate on issues surrounding attitude, and they choose to adopt one-component view of attitude as "a general and enduring (consistent over time) negative or positive evaluation of a person, object, or issue" (p.129).

However, Zanna and Rempel (1988) discuss three critical issues: (1) one-component versus three component view of attitude, (2) the extent to which an attitude is dispositional or episodic in nature, and (3) the relationship between affect and evaluation. After discussing these three issues, they conclude that an attitude should be defined as "the categorization of a stimulus object along an evaluative dimension based upon, or generated from, three general classes of information: (1) cognitive information, (2) affective or emotional information, and/or (3) information concerning past behaviours or behavioural intentions" (p.319).

This definition helps resolve the three issues surrounding attitude, and is more flexible and adaptable to various situations. It fits the Web well for two reasons. First of all, the Web is changing rapidly and a firm's website in this week might be different from that in the next week. A web site is a multimedia product, which could contain audio, video, graphics and texts. More importantly, a web site allows users to interact with it in real time. It does appear that in the case of commercial websites, if a website is well liked, some visitors to the website may be more receptive to the website's contents. Hence, this research attempt to explore consumers' attitude toward the website as an indicator of e-service quality effectiveness and a successful point of a "hospitable" website.

CONCEPTUAL FRAMEWORK

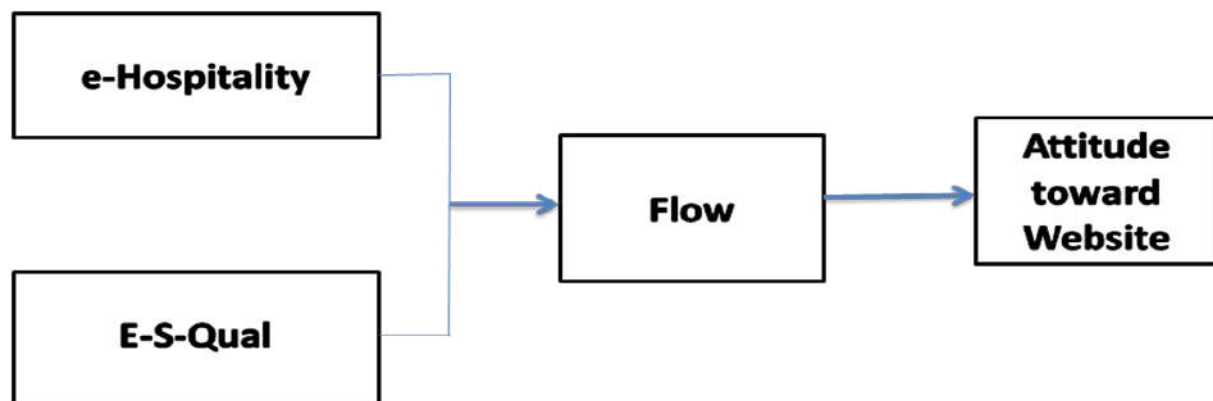


Figure 9: Conceptual Framework

Figure 1 depicts the research model of this study. The model proposes that E-S-Qual and e-Hospitality have an effect on the attitude toward the websites. Consequently, flow was proposed to enhance the effect of E-S-Qual and e-Hospitality on attitude toward websites. The variables of this study are:

- **E-Hospitality** - the commitment of electronic provider to create memorable experience for the guest through fulfilling the needs of web-guests; emotional and psychological needs. Emotional (Parsa et al, 2009; Lashley, 2008; Lovelock, Wirtz, Keh & Lu, 2005; Hemmington, 2007) Psychological (Lashley, 2008; Palmer, 1992; King, 1995; Telfer, 2000; Neuwen, 1975)
- **E-S-Qual** - the extent to which a web site facilitates efficient and systems availability of online information search (Parasuraman, Zeithaml, & Malhotra, 2005).
- **Attitude Toward Website** - an evaluative dimension based from three classes of information; cognitive, affective and behavioural information toward the hotel websites (Chen and Wells, 1999; Chen et al, 2002)
- **Flow** - the state of time distortion and enjoyment that occur during network navigation (Skadberg & Kimmel 2004, Ellis et al., 1994; Novak & Hoffman, 2000; Koufaris, 2002 and Hsu and Lu, 2004).

Based on above literature gap and conceptual framework, we proposed below hypotheses:

- H₁** : e-Hospitality is correlated with flow
- H₂** : E-S-Qual is correlated with flow
- H₃** : Flow is correlated with attitude to the website
- H_{4(a)}**: Flow is correlated with e-Hospitality to determine attitude toward the website
- H_{4(b)}**: Flow is correlated with E-S-Qual to determine attitude toward the website.
- H₅** : e-Hospitality and E-S-Qual are correlated with flow to determine attitude toward the website

METHODOLOGY

This research used a questionnaire survey to collect the data as in *Appendix 1*. The questionnaire included forty items measuring four factors as well as six items of demographic questions. To develop the scales that would allow us to measure the constructs of e-Hospitality performance, e-service quality (E-S-Qual) and its relationship with attitude towards web site and flow as moderating, we perform critical review of relevant literatures. The scales were developed from the adoption and adjustment of the established constructs; *E-S-Qual* (Parasuraman, Zeithaml, & Malhotra, 2005); *Attitude toward the Website* (Chen and Wells, 1999; Chen et al, 2002) and *flow* (Skadberg & Kimmel 2004, Ellis et al., 1994; Novak & Hoffman, 1996; Koufaris, 2002 and Hsu and Lu, 2004).

The survey population is the post-graduate students, and convenience sampling was used. For the purpose of convenient to part time students, they were given a link to answer the questionnaire.

The respondent was asked to indicate his/her level of agreement or disagreement with a series of statements based on a 5-point Likert scale. Overall, 59 responses were received. Then researchers examined these completed surveys and dropped those with incomplete answers such as a surveys that 50% incomplete.

We managed to get 52 respondents which are considered as 'appropriate for most research' according to Roscoe (1975) in Sekaran 2003. The respondent demographics are listed in *Table 1*.

Table 1: Respondent Demographics (N=52)

Demographic		Frequency	Percent
Gender	Male	26	50
	Female	26	50
Age	20-30	23	44.2
	30-40	23	44.2
	40-50	6	11.5
Country	Indonesia	1	1.9
	Iran	5	9.6
	Jordan	1	1.9
	Malaysia	41	78.8
	Middle East	1	1.9
	Not stated	3	5.7
Education	Master	32	61.5
	PhD/DBA	20	38.5

RESULTS AND FINDINGS

Reliability and Validity

As shown in *Table 2*, the Cronbach's Alpha reliability coefficients (α 's) for the sample data set is high, reliable and valid at 0.97, which is greater than 0.7 (Anderson and Gerbing, 1988 and Sureshchandar, 2001). Pertaining to the study construct component, *attitude toward website* shows among the highest Cronbach's Alpha coefficient which is 0.94, followed by *E-S-Qual* (0.91), *e-Hospitality* (0.89) while *Flow* (0.85).

Table 2: Reliability Result

Variables	No of items	(α)	M	SD
E-S-Qual	11	0.91	3.365	0.634
e-Hospitality	8	0.89	3.330	0.623
Flow	4	0.85	2.899	0.821
Attitude Toward Websites	11	0.94	3.250	0.754
OVERALL	34	0.97		

E-Hospitality Constructs

For the new construct of e-Hospitality, we carried out an exhaustive review of the specializing literature and a search of previous scales available for adjustment. The studies of Parsa et al (2009), Lashley (2008), Hemmington (2007), Telfer (2000), Nouwen (1975), King (1995) and Palmer (1992) has been reviewed for the e-Hospitality scale development. Then, we carried out a series of qualitative studies using in-depth interviews to obtain the e-Hospitality profile.

Once the context of analysis was known and developed by the qualitative study, the information contained in the preliminary scales was judged by a group of experts belonging to the academic area related to the hospitality marketing. Based on the opinion, we refined the scales. From the initial 30 items, eight items was selected for further refinement for pilot test. The result indicates that the Cronbach's alpha for the eight-items of e-Hospitality measure are above 0.70. Sekaran (2003) stated that "those in 0.70 ranges are acceptable".

Based on pilot test, all eight items shows a good usability based on the mean scores. The scale were tapped on 5-point scale; 1=strongly disagree, 2=disagree, 3=neutral, 4=agree and 5=strongly agree.

From the result in *Table 3*, it shows that greeting, additional information beside the hotel information and a user-friendly web site as the main criterion of a hospitable website. This is aligned with offline hospitality definition by Lovelock, Wirtz, Keh and Lu (2005) as "hospitality-related services should ideally, reflect pleasure at meeting

new customers and greeting old ones when they return”, “friendly” as Ottenbacher, Harrington and Parsa (2009), Lashley (2008) and Hemmington (2007).

Table 3: e-Hospitality constructs (N=52)

Mean		Std. Deviation
The site has sense of compassion	3.1731	0.92294
The site greet and welcoming me as a guest	3.5577	0.97846
The site is user friendly	3.4615	0.89578
The site is entertaining	3.0192	0.99981
I have a memorable occasions with the site	2.8654	1.01032
The site has a friendly tools as medium of information interaction	3.2885	1.01627
The site has provide additional information beside lodging information	3.5385	0.93853
The site has courteous dismissal and deduction with guest comments / complaints	3.3462	0.83747

*1=strongly disagree, 2=disagree, 3=neutral, 4=agree and 5=strongly agree.

Relationship of the Constructs

Among the components of independent variables, e-Hospitality show strong relationship with Attitude toward Websites (82.8%). The significant value for the study is 0.000 which is below 0.05 then the relationship is significant (Urdan, 2005).

Based on the findings in *Table 4*, the Pearson Correlation has been used to determine the relationship between the first independent variable dimension (*E-S-Qual and e-Hospitality*) and the dependent variables (*Attitude toward Website*) with intervening variable by *Flow*.

Table 4: Correlation Matrix

VARIABLES	Attitude Toward Websites	E-S-Qual	e-Hospitality	Flow
E-S-Qual	0.781**	1	0.739**	0.570**
e-Hospitality	0.828**	0.739**	1	0.728**
Flow	0.722**	0.570**	0.728**	1

Hypotheses Testing

To test the hypotheses in this study, multiple regression analysis was done. The results of all the variables involved in this study can be seen in *Table 5* below. Noted that all the hypotheses have been supported; based on the value of R² (which explained the relationship between the variables) and the coefficient level which reaches statistical significance $p < .0005$ (Sekaran, 2003, Tabachnick and Fidell, 1996).

Table 5: Hypotheses Testing

Hypothesis	Relationship	Result
H1	E-Hospitality \square Flow	SUPPORTED R Square = 0.529, P = 0.000
H2	E-S-Qual \square Flow	SUPPORTED R Square = 0.325, P = 0.000
H3	Flow \square Attitude to the website	SUPPORTED R Square = 0.521, P = 0.000
H4 (a)	Flow \square e-Hospitality \square Attitude to the website	SUPPORTED R Square = 0.637, P = 0.000
H4 (b)	Flow \square E-S-Qual \square Attitude to the website	SUPPORTED R Square = 0.649, P = 0.000
H5	E-Hospitality + E-S-Qual \square Flow \square attitude toward website	SUPPORTED R Square = 0.723, P = 0.000

* Correlation at .0005

After all the intercorrelations among the two independent variables are taken into account, the R² stated about 72.3% variance for attitude toward websites has been significantly explained by the E-S-Qual and E-Hospitality variables and this quite respectable result because more than 0.3 or 30 percent acceptance value (Sekaran, 2003) Tabachnick and Fidell, 1996) toward assess the statistical significance result. In addition, coefficient test is significant at level 0.000 which reaches statistical significance $p < .0005$ (Sekaran, 2003, Tabachnick and Fidell, 1996). Therefore, the study concludes the E-S-Qual and E-Hospitality significantly explains attitude toward website.

The study shows that the relationship of flow as mediating variables between e-Hospitality with attitude toward the website was 63.7% with 95% of significant level. Apart from that, the relationship of flow as mediating variables between E-S-Qual with attitude toward the website was 64.9% with 95% of significant level. The most important point is the relationship of flow as mediating variables between e-Hospitality and E-S-Qual with attitude toward the website was 72.3% with 95% of significant level.

Therefore, it shows that attitude toward website was explained by both e-Hospitality and E-S-Qual and enhanced through the flow.

DISCUSSION AND CONCLUSION

In this paper, e-Hospitality is developed to measure the important of website to have a hospitable element beside the emphasis on e-service quality. The constructs are aligned with Bauer, Falk, and Hammerschmidt (2006) findings that suggest users strongly associate the efficiency of a Web site and the quality of the content with the “visual appeal” of the web site design. It also shows that the “tangibalized” of intangible service factor are important to service provider as in our case, hotel website.

The research also found that the element of flow to create “enjoyment” and “time distortion” of the website user might explain a favourable attitude toward the website. Ghani and Deshpande (1994); Hoffman and Novak (1996); Chen et al., (2000) and Novak et al. (2000) has successfully used a similar approach in eliciting examples of experiences of flow among online consumers.

As with any study, there are limitations with this study. First the experience with the hotel website among the respondents was not tested a priori. Some respondents may never have used a hotel website to search information or various numbers of websites for that purposed. As a result, certain respondents may have been asked to evaluate an activity they have never used before.

Second, the measurement was tested specifically on hotel website. This may not be generalized to other tourism website. Hence, further research needed to explore the performance of this scale. This construct could include travel agent website, airline companies’ websites or any hospitality industries players.

Thirdly, the variability of respondent demographic (79% Malaysian and 21% from other country such as Indonesia, Iran, Jordan, Middle-east, etc.) may have an effect based on the cultural differences. Apart from that, the limitations of the convenience sampling process affect the generalisability of the results. Future research could overcome both limitations by adopting a more rigorous sampling process across different nation website.

This research examines the effects of e-Hospitality and E-S-Qual on consumer attitude toward hotel website. Apart from that the relationships also mediate by flow. Thus, website managers and should emphasis on service quality and also hospitality of the website beside enjoyment and time distortion to enhance a favourable attitude toward the websites. In other words, an engaging website that has “hospitality elements” will leverage the customer attitude on websites beside the functional factors of systems availability and efficiency.

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DESIGN AND DEVELOPMENT OF A SEED-SOWING ROBOT PROTOTYPE

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Abstract

This study aims to develop a small prototype of a seed-sowing mobile robot, that can follow the desired path, and be able to collect, carry and drop the object of interest (seeds) at the designated places. The robot utilizes an infrared (IR) sensor for detecting the desired line, while an ultrasonic sensor for detecting the desired drop location. These sensor inputs are processed by a microcontroller, which in turn sends the control signal to the dc motor for the line-following task. The microcontroller also sends the control signal to a group of servo motors (robot arms) to collect, carry and drop the seeds onto the crop border. The functionality of the proposed robot was tested in a lab setting, where the results validated the concept. This robot serves as a proof of concept for the seed-sowing robot application in the agriculture sector.

Keywords: seed-sowing robot, mobile robot, agriculture robot, line following, robot arm.

INTRODUCTION

Agriculture production is crucial for a variety of reasons. By producing more food, raising productivity has an impact on income, labor migration, and market expansion in agriculture. The allocation of limited resources is made more effective by increased agricultural output. Farmers now have the option to boost output while preserving the long-term viability of their farms' thanks to new approaches and procedures in precision farming. Precision farming is a concept of farm management based on the application of different technologies [1]. One of the emerging technologies is by introducing robotics for activities such as seed sowing.

A seed-sowing robot is a tool that assists farmers in saving time and money by helping to spread seeds at the desired location [2]. Various seed-sowing robots have

been proposed to date. In [3], a seed-sowing robot was developed with seed spacing intervals and field area parameters as inputs. In [4], a field-based seeding robot was investigated using bullock cart-drawn planters. An agribot was in [5] to cut down on labor costs and time spent digging holes to plant seeds. A smartphone application for directing the movement of the created agribots was also presented in that article. In [6], an automated agricultural farming robot was developed for several farming tasks such as plows, seed sowers, pesticide sprayers, and soil and plant monitoring.

In this article, the design and development of a low-cost prototype for a seed-sowing robot are presented. The robot consists of a line-following mechanism that tracks the desired path of the simulated environment. This mechanism utilizes an infrared sensor for detecting the path and differential drive for locomotion. Meanwhile, for the seed-sowing mechanism, four degree-of-freedom (DOF) manipulator is designed using four servo motors. In this article, Section 2 presents the design of the proposed robot, and Section 3 presents the results of the validation. Meanwhile, Section 4 concludes the article.

METHODOLOGY

This section discusses the design of the seed sowing robot mechanism: line following and robot arm for seed sowing. The circuit connection of the proposed robot is shown in Figure 10. The line following system consists of an Arduino microcontroller, a motor driver, two 3.7V Lithium-Ion batteries, two dc motors, and three sets of infrared sensors/receivers. Meanwhile, for the robot arm, an Arduino microcontroller, an ultrasonic sensor, and four servos are used. The mechanism is presented in the following subsections.

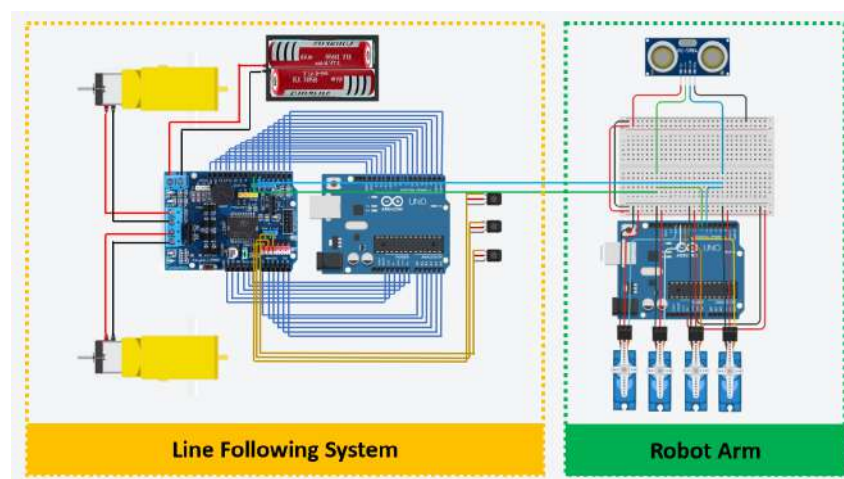


Figure 10: Schematic of the proposed seed-sowing robot.

Line Following System

The line-following system utilizes three infrared sensors to detect the desired black line. Each is positioned in front of the robot, side-by-side, and are responsible for

detecting black line for the left, middle and right portion ahead of the robot respectively. When detecting the surface, inputs from infrared sensors with an 8-bit analog-to-digital converter of the microcontroller will be >500 for black, while <500 for white detection. A single sensor outputting a value of >500 indicates that the robot should go in that direction, while if two adjacent sensors output a value of >500 , the robot is ordered to go in that direction, albeit slightly. If all three of them output >500 , the robot will stop moving.

An ultrasonic sensor accompanies the system, adding a stopping functionality for when a 'sign' was detected. The 'sign' here refers to any obstacle and acts as an indicator of when our seed-sowing robot should start planting. In accomplishing that, the ultrasonic sensor was positioned to always face the left of the robot, and the 'sign' is positioned outside of the track, as the robot arm will operate on the inner side of the track, planting seeds during the time the robot was stopped. The stop was delayed to 13s for robot arm operation, after which the robot will move forward slightly to move out of the 'sign' range and proceed back in following the track.

Robotic Arm

In this study, a robotic arm is designed as shown in Figure 11 for picking up and dropping the seeds for sowing. This robot arm consists of four servos that can be controlled by the microcontroller. After setting the servos to reset position (0°), several wooden sticks are used to connect them. Also, the last servo is used as a gripper. Then, the robot arm is placed on the robot platform presented in Section 2.1. For picking up and dropping the seeds at desired locations, the trial-and-error method is used to find suitable servo angles.

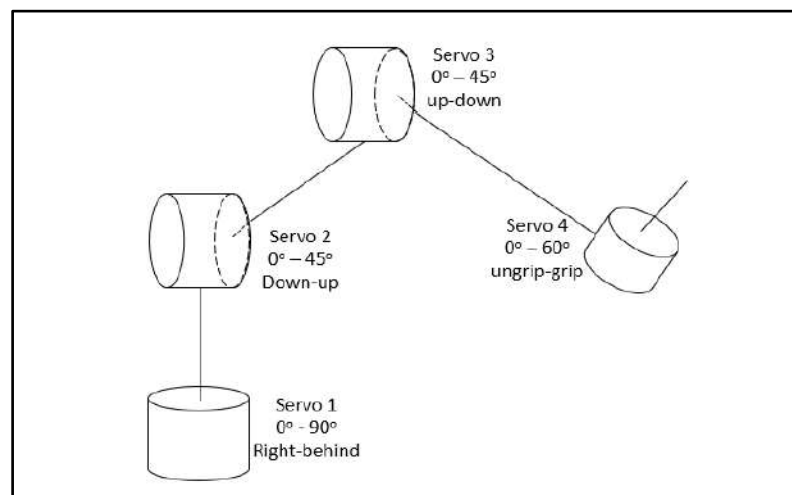


Figure 11: Schematic design of the robot arm.

RESULTS AND DISCUSSION

To test the proposed seed-sowing robot design, an experiment was carried out in a simulated farming environment as shown in Figure 12. The track was designed with an enclosure positioned in the inner part of the track, filled with soil to emulate a planting environment. On the outer track part, a pole was positioned at a point, acting as the 'sign' for the robot to start its planting operation. The basket containing 'seeds' are positioned in the back of the robot, on top of the battery holder. It is expected that when the robot is positioned in front of the pole, the ultrasonic sensor will detect the pole, stopping the robot from moving along the track. The robot arm function will then start, moving the robot arm, and taking the seeds from the basket before dropping them in the enclosure. After that, the robot will resume its line-following function, moving along the tracks until again the pole was detected, and this repeats indefinitely, or until the battery is depleted.

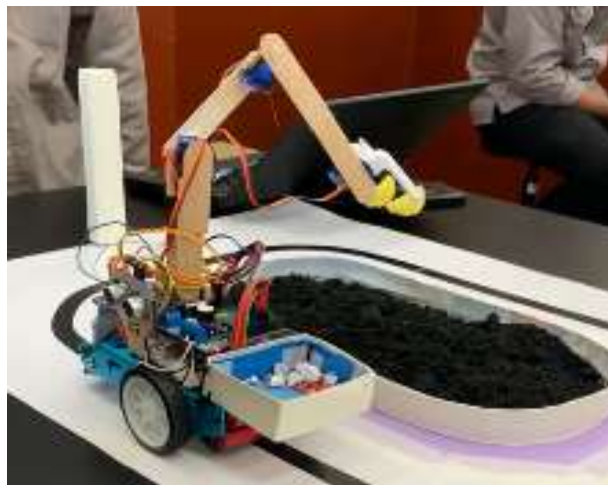


Figure 12: The proposed seed-sowing robot in a simulated environment.

During the experiment, it is found that the robot moves exactly as we expected, albeit with some slight errors. The expected movement was achieved, as the robot travels along the track, and stops when it is in front of the pole, after which the robot arm moved, grabs the 'seeds', and drops them into the enclosure. The errors, on the other hand, vary, with one error being the robot having traveled off-track. This occurs randomly after the robot tries to resume its line-following function. This was expected, as the robot was programmed to move straight a little after the robot arm function was done, to move away from the obstacle, and awkward stopping (i.e., not straight) may result in off-track. Another error was that certain servos may not work during the robot's arm movement. This was not expected of us, but still, we managed to find the cause, which was due to the servo having some faults.

Following that, we believe that improvement could be made on the robot, particularly the programming so that off-track could be avoided. This could be done by implementing a PID controller to ensure the robot is positioned precisely when stopping. The servo matter could simply be improved by replacing the servo with a

brand-new, perfectly functioning servo. Other than that, we believe that our robot's function well as intended. Certain improvements could also be made to the design, as our robot currently only carries out the sowing function and having a tilting function will surely better complement our robot's capabilities.

CONCLUSION

To summarize, agriculture plays an important role in the economy as well as is the backbone of the economic system for developing countries. For decades, agriculture has been related to the production of vital food crops. Promoting sustainable agriculture is one of the ways to achieve the Sustainable Development Goal (SDG) which is SDG 2: Zero Hunger. To achieve this, we propose a low-cost seed-sowing robot that consists of a differential drive mobile robot platform and robot manipulator. Through an experiment, it is found that the proposed robot is functional and able to carry out the programmed task successfully. This serves as a proof of concept for the development of the seed-sowing robot. Future works involve the improvement of the robot arm mechanism using a bigger platform.

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COMPARISON ANALYSIS OF MONITORING ERGONOMIC BODY POSTURE IN WORK PLACE

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Abstract

Monitoring body posture is important in order to produce a quality product of employee. Monitoring body posture that embedded the hardware must be applying in employee work environment especially in industry workplace. Therefore, this paper aims to provides gap of study for existing work development of monitoring body posture of physical ergonomic that exist in market for commercial and for research purposes. The results of the findings is reported from review and analysis of different studies. The strengths and weaknesses of the features and utility are also presented to provide further understanding of the gaps and weaknesses of each research. This study is concluded that these researches are still immature and need further improvements.

Keywords: body posture, workplace, ergonomic, mobile application.

INTRODUCTION

Body posture is important to ensure user provide correct procedure while lifting the object. In industry, there are works station which use the employee require sit along time, lift an object, etc. They are required follow the Standard Operating Procedure in work station to handle the task. Therefore, Industrial employees are exposed to various physical and ergonomics hazards at the workplace. However, failure monitoring body posture encourage the employee may effect of employee health and lead to limitation service of the organisation.

Furthermore, the body posture adjustment nowadays use embedded devices as hardware that frequently used in industries to solve the issues of body posture. This can be illustrated how the application and method is applied to decrease a body posture during work activity is conducted. Therefore, monitoring for body posture in work station is essential process in development hardware and software application for employee in industries.

In this paper, a review on existing works and tool support for monitoring body posture of physical ergonomic in work place are presented. The paper is organized as follows: Section 2 describes the background of study. This is followed by Section 3, survey literature. Then, Section 4 depicted to the discussion of the overall finding that

presents a description of selected tools for monitoring body posture application available in the market together with its comparison analysis. Lastly, Section 5 of this paper ends with a conclusion and future work.

RESEARCH BACKGROUND

This section presents the working posture and ergonomic of this study.

Working posture

Working posture can be defined as the orientation of body parts in a work area while an employee performing a task. Working posture is determined by the characteristics of the employee, the design of workstation and the process. Employees can perform the jobs either in standing or sitting, and combination in their workplaces.

Ergonomics

“Ergonomics applies information about human behaviour, abilities and limitations and other characteristics to the design of tools, machines, tasks, jobs and environments for productive, safe, comfortable and effective human use” (Barber & Mourshed, 2007).

Arduino

Arduino is a single-board microcontroller meant to make the application more accessible which are interactive objects and its surroundings. The hardware component of Arduino is quite inexpensive, allowing this application to be extensively used around the world (D’Ausilio, 2012). However, when creating an Arduino application, connected devices such as sensors, LEDs, wires, and other components that employ a microcontroller as a control system for signal processing, instrumentation, and other operations must be defined during the product's planning and design (Bo & Li, 2010).

Mobile Application

Mobile Application is a software application designed to run on mobile devices use a recent technological innovation. Mobile applications have appeared because of the convergence of media, information technology, Internet, and advanced technologies (Phongtraychack & Dolgaya, 2018). Using mobile application able to monitor the activities including kindergartens activities (Yusop et al., 2022) and etc.

LITERATURE REVIEW

There have been several works on monitoring body posture including the managing process. In this section, we presents the existing works approach for the body posture in working environment.

Researcher in (Alsuwaidi et al., 2016) developed an application for posture detection and correction. The purposed developed to clarify the poor posture and train user to better posture. Here, they embedded the vibrational feedback that integrated the hardware modules such as AHRS sensors, vibration motors, microcontroller and a wireless module. Collected data by devices send on the microcontroller and formulated mathematic operations. The use mobile app to provides a feedback for daily posture. However, there are certain application not perform well as their challenges in future work.

Researcher in (Lim et al., n.d.) designed and developed of wearable posture identification using accelerometers. The use of accelerometers used for identifying the individual posture. The posture angle is calculated using Arduino . Based on the experiments, they found that accelerometers is effective to perform real ttime analysis on monitoring sitting posture. However, the limitation of this study focus on y-axis. Researcher in (Matuska et al., 2020) developed a smart system for sitting posture detection in incorrect position. The smart is integrated with six sensor with IoT node based and Arduino. Further, mobile app is developed to notify user and give report to user about sitting posture using cloud namely MQTT protocol. They also provided a simple rule for incorrect sitting. However, the work focusing on the sitting posture not to handle for workload posture.

Researcher in (Xia & Nagle, 2018) have developed a posture detector using a flex sensor. They also embedded signal processor elastic wrap, vibrator to indicate the calibration process if there is a bad posture detected and alert to user. In this study, LilyPad microcontrollers used as prototype. However, the focused on the sitting position.

Researcher in (Beyaz, 2018) have developed a posture determination using flex sensor and images analysis. The focused research on agriculture work to measure the posture angle. However, the work not focus on the working with heavy work such as appropriate working position.

Researcher in (Otto & Battaia, 2017) studied by examine the optimization model for physical ergonomic risks for assembly line balancing and job rotation scheduling. Based on their findings, they found that working out guidelines on preventive ergonomic interventions, adaptation of risk estimation methods of need preventing planning and advance modelling and solution approaches. However, he three parties must sit together, ergonomist, production manager and operation researcher to accomplish the research challenges.

RESULT

The six existing works related to development Arduino in monitoring body posture of workplace is compared. The comparison features based on methodology/approach/technique, Web and Mobile apps and purposes in the body posture in working environment as shown in Table 1.

Table 1: Comparison of existing works approach for the body posture in working environment

Author(s)	Activity/items	Ar du in o	In du str y	Methodology					Platform	
				M o d el	M e t h o d	A p p r o a c h	F r a m e w o r k	T o o l	W e b	M o b i l e A p p
(Alsuwaidi et al., 2016)	Vibrational feedback	✓					✓	✓		✓
(Lim et al., n.d.)	Accelerometers	✓						✓		
(Matuska et al., 2020)	6 sensors	✓						✓		✓
(Friha et al., 2021)	flex sensor	✓						✓		
(Beyaz, 2018)	flex sensor	✓						✓		
(Otto & Battaïa, 2017)	line balancing and job rotation		✓					✓		
	Total	5	1	0	0	0	1	6		2

Based on these analyses, they demonstrate the limitations of monitoring physical ergonomic in workplace methodologies. Tools contributes highest studies with six studies. However, the method and tool for develop Arduino application in applying mobile application is very limited for monitoring body posture of employee at workplace.

DISCUSSION

To developed an application for employee in industry, identification of tool and employee posture must be considered as early whether development involve in software application only or integrated of software and hardware. A proper analysis for monitoring ergonomic of employee posture must be taking account to ensure work have a good quality work and health while perform the work. However, current works and tools studied by researcher as illustrated as Table 1 has ignored the mobile application that allow the employee able to monitoring the employee posture activity. Thus, it is necessary to have a tool to monitoring the employee ergonomic body posture exercise embedded with Arduino application and mobile application tool. This studies conducted a review on the six studies on comparison of the Arduino application on model, method, approach and framework as well as application for monitoring purpose. A most of studies found that work on the Arduino devices such as used flex sensor. It was found that there are mobile application used for body posture but not to monitoring employee body posture performance while performance the work. Based on our review, as shown on Table 1, This is found that there are various approaches or methodologies used by body posture that supporting the Arduino application. This study is also found that body posture application based on the specificity and purpose of the respective tools. Based on the analysis, most of Arduino application developed are not limited to assist to employee body posture but almost none existence for monitoring especially for the mobile application.

CONCLUSION AND FUTURE WORK

Development of body posture application is important in order to produce a quality product to employee so that employee can produce more quality work. Therefore, development Arduino application that embedded the hardware must be applying in mobile application. This is to ensure that the monitoring body posture from employee is consistent, correctness and complete while performing the work. Therefore, this paper provides a gap of study for existing work on development of Arduino application for employee in monitoring body posture that exist in market for commercial and for research purposes. We report the findings and analysis different of studies on development Arduino application for employee in monitoring work body posture while conducting work activity using mobile application. The strength and weakness provide the understanding the limitations of the existing tool. This study can conclude that the current existing still immature and need further enhancements.

In future works, this study will be plan to further thorough research in a form of Systematic Literature Review (SLR), developed an approach and automated tool that would be used by employee or employee in industries for monitoring the ergonomic body posture performance using mobile application. This tool will assist the employee or employee to validate the exercise performance.

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READING IN THE ERA OF SOCIAL MEDIA: UNDERSTANDING GIFTED STUDENTS' HABITS AND ATTITUDE TOWARDS READING

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Abstract

Reading is essential in the process of growth in youth as it improves brain connectivity, increases vocabulary and comprehension, acts as a mental stimulation and so much more. This paper aims to understand the reading habits and attitudes of the students in Kolej GENIUS Insan (KGI). The students enrolled in this secondary school have a high intelligence quotient (IQ) compared to their peers in other schools and are described to be gifted and talented students. A questionnaire was designed in a quantitative manner and distributed to the 50 students of Foundation 3 where only 45 out of 50 responded. The questionnaire analysed the students' reading habits, preferences and attitudes towards reading. It was revealed that most of the students enjoyed reading especially novels and fiction as they find the activity fun but if given the choice they would much rather watch movies or listen to music. They would usually read to fill up their boredom and some spend time reading as long as 30 minutes to 1 hour while others spend 1 to 2 hours. Most students read to expand their knowledge and brush up their linguistic skills and understand that reading has a positive impact on their academic performances. Some students also faced difficulty in reading as sometimes they lack motivation to read or there was a lack of reading materials around them and while most of them preferred more pictures in the reading materials, others were already fine with how the reading material was. Based on the findings, several recommendations were made to improve the students' reading habits and attitude. Conducting this survey is essential as it helps the lecturers and parents of the students to truly understand the reading habits and reading attitude of the students in KGI and more actions could be taken to benefit their positive attitude towards reading.

Keywords: *reading habits, reading attitude, reading preferences.*

INTRODUCTION

Reading plays a huge role in an individual's personal and academic development. It is one of the main skills that would be developed in school and continues to be enhanced for many years in the academic and work journey. In modern society, individuals are taught to read from a young age and there are so many pre-school programmes that focus on developing reading skills as parents believe it would be the

foundation for discovering the world of knowledge at school level. Generally, teachers and parents stress the importance of good reading skills from young as it influences the mental growth throughout one's life. Reading helps a child's brain to grow and be more active. Research shows that those who have a good reading ability perform better in abstract thinking, general cognition and pattern finding. Medical News Today reports that strong reading skills are a predictor for higher intelligence.

One of the main concerns in the academic world today is the reading habit and behaviour among the young generation of students. With the presence of so much distractions in the form of devices, applications, software and platforms, reading has taken a list of competitors which are more interesting to explore and embrace by the young generations of students and young minds. The long and challenging process of coding the text and interpreting the meaning and message lies within are proven to be too complicated to many as they prefer the Instagram, TikTok and many other popular apps form of presentation. Even watching the videos on YouTube could be too long for some. Thus, the need to relook and evaluate our strategies with the reading skills and other aspects of printed media that still survive today.

Reading in the Era of Social Media

In this day and age, people tend to read more on devices rather than the traditional books and printed materials. People who choose to read ebooks do so due to the variety of books they can have access to through just a device. Not only that, ebooks are easier to access and are more environmentally friendly. With that said, many readers still do prefer the traditional printed books. Traditional books offer an experience that is much different from ebooks. Readers are able to absorb more information as they are more likely to focus and be less distracted. Just like everything else, the trends of reading are heavily influenced by social media. Avid readers usually share their opinions on books and recommend books to their audience on social media. Audiences vary from the young to old and that includes students. This study is made to observe the habits and attitudes of the students of Kolej GENIUS Insan.

METHODOLOGY

This study used a quantitative survey for data collection. This research method was selected as it covered the basic information on the type of reading materials, reading time allocated and other aspects of reading behaviour involved. The participants of this survey were the Foundation 3 students of Kolej GENIUS Insan in 2020. Hence, an online questionnaire was distributed to the 50 students. However, the response rate was 90% as only 45 responses were received. The questionnaire is used as the main instrument in this study and comprises questions based on the reading habits of students, factors that influence the students' reading habits and the students' reading attitude. Some questions required the students to choose the answers provided while

other questions required the students to give their own answers. The students were given a week to submit their responses.

Research Objectives

The study was carried out to understand reading habits among the gifted students of Kolej GENIUS Insan in general. The information gathered will be useful in preparing and planning the reading materials and activities that would be suitable and interesting for them to use during their class and free time. The teaching and learning programs can be adjusted and improved using the data from the study. Basically, the research objectives set for this study are:

- To understand the general reading habits among the gifted students of Kolej GENIUS Insan.
- To discover the students' reading activities for their academic and leisure time.

To achieve the objectives mentioned above, the research questions prepared for this study are:

- What are the general reading habits among the gifted students of Kolej GENIUS Insan?
- How do students in Kolej GENIUS Insan manage their reading activity for academic and leisure?

A set of questionnaires covering the related topic on reading behaviour and activities was designed, adopting a questionnaire from a previous research on secondary school students' reading habits. Other relevant questions were suited to discover other aspects on their reading habits as discussed in the findings and discussion section of this paper.

RESULTS AND DISCUSSION

Table 1. Enjoyment of Reading

Answers	Frequency	Percentage (%)
Yes	40	88.8
No	5	12.2

Table 1 shows the students' enjoyment of reading. 40 (88.8%) respondents enjoyed reading while 5 (12.2%) respondents did not. The findings showed that most of the respondents actually enjoy reading activity. The availability of reading materials in their academic and non-academic realm had enabled them in choosing their reading activity based on their preferred choice.

This shows that most of the students have a positive outlook on reading. The reading requirement for academic and personal purposes had been the main reasons for most students choosing reading as one of their main daily activities at their classroom and hostel. Typical secondary school students have always been instructed to make revisions using their textbook and reference books. Assignments that require reading and library research are quite common among the students of KGI.

Table 2. Reason for reading

Answers	Frequency	Percentage (%)
Fun	21	46.6
Relaxing	11	24.4
General Knowledge	9	20.0
Educational (Exams)	4	8.8
Boring - No	4	8.8
Spare Time	2	4.4

Table 2 shows the reason students read. Surprisingly, 21 (46.6%) respondents read because it is fun and 11 (24.4%) respondents find reading to be relaxing. 9 (20.0%) respondents read to gain general knowledge. Other reasons are for educational purposes and because they had spare time. 4 (8.8%) respondents did not like reading as they found it boring.

This shows that students read for entertainment and find relaxation in reading. Reading can be seen as a stress reliever while also a medium to gain knowledge from a general perspective and educational perspective. Most students don't view reading as a chore but a fun activity that can be done in their spare time and they don't associate reading with being a stressful activity and as an activity that is required only in educational terms.

Table 3 shows the other activities the students would do instead of reading. 12 (26.6%) respondents would rather watch movies or anime, 9 (20.0%) respondents would listen to music and 8 (17.7) would play games. Other activities include exercising, sleeping, going on social media, doing some writing or drawing. Amazingly, there are still 5 (11.1%) respondents who would still choose to read among other activities.

Table 3. Something else they would rather do

Answers	Frequency	Percentage (%)
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Movies/Animes	12	26.6
Music	9	20.0
Games	8	17.7
Exercise	7	15.5
Videos/Youtube	5	11.1
Reading	5	11.1
Sleep	4	8.8
Social Media/Internet	4	8.8
Writing/Assignments	3	6.6
Drawing	2	4.4

Despite their enjoyment for reading, most students would still rather do other things than read. This shows that although they do like to read, reading wouldn't be their first choice. They would rather do activities that are more stimulating such as watching movies or playing games. Others would rather be more physically stimulated so they prefer to exercise.

Table 4. Preference of Reading Material

Answers	Frequency	Percentage (%)
Novels/Fiction	34	75.5
Articles/Newspapers	18	40.0
Educational	15	33.3
Comics	11	24.4
Magazines/Social Media	11	24.4

Table 4 shows the students' reading material preferences. 34 (75.5%) respondents prefer reading novels and fiction. It is surprising to find that articles and newspapers are the second most read material as 18 (40.0%) respondents prefer it as their reading material especially at their age. 15 (33.3%) respondents prefer educational reading materials. Other reading materials include comics and magazines or social media posts.

Many students prefer reading novels that are fictional rather than articles or newspapers that are more factual. They would prefer reading as a leisure activity

rather than an activity to keep up with the news or to search up information. This might be due to their view of reading which should be enjoyable and fun.

Table 5. Enhancement of Reading Experience

Answers	Frequency	Percentage (%)
Pictures	16	35.5
Sufficient	14	31.1
Vocabulary/Complexity	5	11.1
Bigger Fonts	4	8.8
Minimised Texts	3	6.6
Environment	1	2.2
Colour	1	2.2

Table 5 shows what could enhance the students' reading experience. 16 (35.5%) respondents feel that pictures would enhance their reading experience while 14 (31.1%) respondents feel they already enjoy their reading material as it is. 5 (11.1%) respondents would enjoy a wide range of vocabulary and complexity in their reading experience. Other enhancements include bigger fonts, minimised texts, their environment and the colour could enhance their reading experience.

Reading material enhancement preference is quite divided among the students. For a lot of them, no enhancement is needed in their reading material. For those that would want an enhancement in their reading experience, they want pictures included in their reading material.

Table 6. Frequency of Reading

Answers	Frequency	Percentage (%)
30 minutes - 1 hour	19	42.2
1 - 2 hours	16	35.5
2 - 3 hours	9	20.0
4 hours and above	7	15.5

Table 6 shows how much time students spend on reading. 19 (42.2%) respondents spend about 30 minutes to an hour while 16 (35.5%) respondents spend one to two hours on reading. 9 (20.0%) respondents take as long as two to three hours to read and 7 (15.5%) respondents actually take up to four hours and above to read.

Most students spend only a short time on reading despite them finding reading to be fun. This might be the response from casual readers. On the other hand, there are also a large percentage of students that spend around 1-2 hours on reading. This is the average time for the students to spend time reading. There are also quite a number of students that spend a large amount of time on reading. These avid readers would spend 2-3 hours or 4 hours and above reading.

Table 7. When do you read?

Answers	Frequency	Percentage (%)
Bored	22	46.6
Spare Time	18	40.0
Exams	3	6.6
Before Sleep	1	2.2
Last Option	1	2.2

Table 7 shows when students read. 22 (46.6%) respondents usually read when they are bored, 18 (40.0%) read in their spare time and 3 (6.6%) only read during exams. Others would read before sleeping or as their last option.

A lot of students choose to read when they feel bored. This shows reading is one of their ways to escape boredom and have fun. This also means students do not find reading a boring activity but rather an activity filled with enjoyment. Many students also read in their spare time which means they view reading as an activity worth their time. They do not feel their time would be wasted when they read.

Table 8. Why is Reading Important to You

Answers	Frequency	Percentage (%)
Knowledge	22	48.8
Linguistic Skills	17	37.7
Creativity/Imagination	9	20.0
Fun/Relaxing	7	15.5
Not Important	1	2.2

Table 8 shows the students' understanding of the importance of reading. 22 (48.8%) respondents say it is to gain knowledge, 17 (37.7%) choose to read to improve their linguistic skills while 9 (20.0%) respondents say it encourages them to be creative

and imaginative. Other respondents find reading to be fun and relaxing or even not important.

Many students understand the importance of reading. They understand that reading is the key to knowledge and a way for them to brush up their linguistic skills. They also understand that reading is a way for them to develop mentally and academically which would help them grow into a knowledgeable and articulate individual.

Table 9. Effect of Reading on Academic Performances

Answers	Frequency	Percentage (%)
Do Not Know At All	11	24.4
Do Not Know Specifically	10	22.2
Knowledge	10	22.2
Linguistic	5	11.1
Higher Grades	5	11.1
Concentration	2	4.4
Creativity	1	2.2

Table 9 shows the students' understanding of the effect of reading on their academic performances. Surprisingly, 11 (24.4%) respondents do not know the effect at all while 10 (22.2%) respondents understand that reading gives a positive impact but do not know what it is specifically. 10 (22.2%) respondents say reading expands their knowledge in a certain subject. Others understand that reading helps in improving their linguistic skills, achieves higher grades, helps them concentrate and encourages them to be creative.

Despite the students knowing reading enhances their knowledge and linguistic skills, they still do not fully grasp the effect of reading on their academic performances. They understand how reading is important but they do not understand its impact on their academic performance. This might be due to the fact that most of them view reading as a leisure activity instead of something that could help them in their academic performance.

Table 10. Factors of Reading Influence

Answers	Frequency	Percentage (%)
Self	23	51.1
Parents	10	22.2
Friends	10	22.2
Siblings	3	6.66
Teachers	2	4.4

Table 10 shows who influences the students to read. 23 (51.1%) respondents say they read on their own will and choose to read by themselves. 10 (22.2%) respondents claim their parents play a role in their reading influence while 10 (22.2%) respondents say that their friends are the ones who influence their reading habits. Others claim their siblings and teachers played a role in the reading interests.

A lot of students have the initiative to read on their own. Most of them do not require outside influence to read and will read voluntarily. This is a good sign that students do not have to be forced to read, which is essential in development.

Table 11. Obstacles Faced When Reading

Answers	Frequency	Percentage (%)
Lack of Motivation	17	37.7
Lack of Materials	9	20.0
Do not understand	7	15.5
Lack of conducive parents	5	11.1
Do Not Like Reading	2	4.4
Scared of Judgement	1	2.2
Lack of Time	1	2.2
Low Attention Span	1	2.2

Table 11 shows the obstacles the students face while reading. 17 (37.7%) respondents complain that they lack the motivation to read, 9 (20.0%) say that there is a lack of reading materials and 7 (15.5%) simply confess that they do not understand what they read. Others claim that they have a lack of conducive parents, they simply

do not like reading, scared of judgement based on their reading material and they do not have time.

Although the students find reading to be fun, most of them lack the motivation to read. This might be due to the fact that reading is not their number one choice when choosing an activity as stated above. Some students also find the lack of materials that they prefer to be an obstacle for them to read. Topics that do not interest them would not influence them to read thus they would choose to do something else they are more interested in.

CONCLUSION

In summary, most of the students enjoy reading for fun and favour novels and fiction as their reading material. Most would spend 30 minutes to an hour reading and usually read when they are bored. Adding to that, students also understand that reading expands their knowledge but surprisingly, they do not feel that reading would have a huge impact on their studies. A lot of students suffer from the lack of motivation to read and would prefer to have more pictures in their reading material. Apart from that, students do not have any difficulty in self-reading as they read on their own account.

With these findings, lecturers of Kolej GENIUS Insan can take advantage of the students' positive outlook towards reading and bring out the best of them. As most students lack motivation to read, lecturers and parents can help encourage them to read and brief them about the positive impacts reading has on their studies.

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WORKING CAPITAL EFFICIENCY AND EARNING MANAGEMENT IN JORDAN

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Abstract

Industrial companies suffer from financial crises and challenges caused by mismanagement of working capital. The inability of industrial companies to provide an appropriate level of cash flow to cover their expenses and pay their financial obligations may negatively affect their existence and continuity. However, this paper aims to provide some literature to examine the mediating role of sales growth and the debt ratio between working capital efficiency and profit management in Jordan. A relationship is found between working capital management and earnings management. Furthermore, the etiquette related to working capital and earnings management was reviewed. It is hoped that the results of this study will help researchers in their future studies to research this topic from various aspects to develop and develop knowledge. In other words, the importance of this study lies in its attempt to make modest contributions to the library of Arab and foreign sciences using a scientific method capable of achieving the objectives of the study, as it helps researchers and those interested in corporate governance and profit management.

Keywords: *Earning Management, Corporate Governance, Working Capital Efficiency, and Manufacturing Companies.*

INTRODUCTION

Working capital represents the amount of day-to-day operating liquidity available to a business. It is the difference between resources of the firm in cash or readily convertible into cash, which known as current assets, and organizational commitments for which cash will soon be required known as current liabilities (Ismail, 2017). Working capital management is a method of deployment of current assets and current liabilities efficiently to maximize short- term liquidity. Managing the firm's working capital ensures that the firm has sufficient resources to continue its operations and likelihood of growth and continuity in business. All individual components of working capital play a vital role in the performance of any firm (Omucheyi, 2019).

Working capital management is vital for short-run corporate solvency and survival as it allows the company to use the hidden cash and to limit working capital requirement. However, the decisions involved in working capital management should be associated with the trend towards greater corporate responsibility and the conduct of business within acceptable ethical standards. Transparency, accountability and openness in reporting and disclosure of information, both operational and financial, are vital to the practice of good corporate governance.

Working capital management involves the relationship between a firm's short-term assets and its short-term liabilities. Current assets include those assets that in normal course of business have to return into cash within a short period under normal conditions, ordinarily within a year and such temporary investment as may be readily converted into cash upon need (Sensini, 2020). A certain part of the investment in working capital is financed by current liabilities as payable and short-term maturity. The amounts invested in working capital are often high in proportion to the total assets employed and so it is vital that these amounts are used in an efficient and effective way (Ganesan, & Dev, 2019). The working capital's efficiency is measured by net working capital that represents the excess of current assets over current liabilities. In addition, Pooja (2020) defined the efficiency of working capital as a measure of how well a company balances money it is owed by customers on sales and money invested in inventoried goods against money it owes for acquiring the inventory.

Studies on working capital management have been conducted extensively in both developing and developed countries such as Singapore and Cyprus. However, studies on working capital management have been started in developing countries such as Jordan. Diversified working capital management mechanisms have had a different impact on the performance of companies from the perspective of developed countries compared to other emerging market countries due to the environmental and economic differences in the business. This is because the country's economy in emerging markets is still in the process of moving towards a more developed country. As such, the unstable political situation and currency fluctuations in emerging market countries have made those countries more dangerous.

Most of the past studies that discuss the relationship between working capital management and firm profitability are from different sectors such as services sector and technology studies conducted by Zayanderoodi (2011) and Ganesan (2007). Different discussions and explanations were obtained in their study. Among the past studies that discuss the relationship between working capital management and firm profitability are Ching et al. (2011) who conducted a study of firms in Brazil. The results of the study found that there is a positive relationship between working capital management with firm profits and is also supported by studies conducted by Abuzayed (2011), Sharma and Kumar (2011), Gill (2011) and Nobanee et al. (2011) who also obtained similar study results in the services sector. Nevertheless, Sur and

Chakraborty (2011) obtained different study results i.e. negative relationship between working capital management with profitability of listed firms in pharmaceutical industry in India. Similarly, the study conducted by Mojtahedzadeh et al. (2011), Enqvist et al. (2014), Mansoori and Muhammad (2012). Valipour et al. (2012) obtained similar study results in the textile industry. However, this paper aims to investigate the moderating role of sales growth, and debt ratio between working capital efficiency and earning management in Jordan.

The financial managers in industrial companies seek to achieve efficiency in the operational cash transition cycle as it is an important factor for managing working capital and enhancing the company's financial flexibility (Rashed and Amin, 2021). However, the environmental variables surrounding the company have an impact on the extent to which the company achieves efficiency in managing working capital. Tingbani et al. (2020) argued that the management of working capital and the performance through investment in working capital is influenced by environmental factors and management capabilities of the company. The optimal size of working capital is conditioned by the operational characteristics of the company and by the reference economic context. Therefore, especially in firm's environment characterized by high environmental variability, identifying the optimal size is complex and requires continuous monitoring, to make the necessary adjustments (Alvarez, et al., 2021).

LITERATURE REVIEW

Corporate Governance

Except for the tiniest businesses, corporate governance is critical. Limited firms have a main responsibility to their shareholders, but they also have a responsibility to other stakeholders. Nonprofits must also be properly directed and supervised, as a few individuals' decisions and actions can have a significant impact on many organizations, as well as individuals and groups. Public sector organizations have a responsibility to serve the state, but they must do so in a way that is fair to all stakeholders.

The majority of countries have a principles-based approach to corporate governance, which includes establishing a complete set of best practices that publicly traded corporations must follow. If it is in the company's best interests not to follow one or more of these standards, it must inform its shareholders of this, as well as the reasons for not doing so. Of course, this does not imply that a principles-based approach is simple; nonetheless, it may be a condition of exchange membership that corporations strictly adhere to this "compliance or interpretation" criterion.

The government is important because it allows companies to access global capital markets and attract a diverse range of investors (especially foreign investors) to fund expansion projects. If companies do not rely on foreign investments, they can build local investor confidence and thus raise capital at a lower cost (Ali and Shahata, 2007).

Companies that apply governance rules have increased investor confidence because these rules ensure that their rights are protected, so investors in companies that apply governance rules well may think well before selling their shares in those companies even when they are exposed to temporary crises that lead to lower prices. Their shares are based on their confidence in the company's ability to overcome these crises, making these companies resilient in a period of crisis.

Earnings Management

Earning Management is part of creative accounting and represents the manipulation of accounting results for the purpose of fabricating a modified impact regarding the company's business performance. Earning management comes in two types: real management of Earnings, which affects cash flow, and managing Earnings through accounting benefits, and through a change in accounting estimates and policies. The second type is the most prevalent and it falls under the concept of creative accounting (Abu Arish, 2016).

Earning management differs from other techniques such as income booting and financial statement cleaning in that it is carried out in secret, i.e. there is no public revelation of the earnings produced, nor is there any disclosure of the methods utilized or the value that has been modified, which makes it necessary for companies to take also to reduce the phenomenon of earning management such as corporate governance and attention to the quality of audit through the use of independent, impartial and objective external auditors (alsaakiniu, 2016). However, Ronen and Yaari (2008) indicate that accruals occur when the time of the occurrence of cash flows differs from the date of the accounting recognition of the company's operations and events.

Hypothesis Development And Working Capital Efficiency

The financial position of a business organization largely depends on the optimization of the company's asset structure (ratio of non-current assets and working capital). The working capital of an economic entity consists of physical and technical means of property, cash and short-term financial investments (loans, securities, promissory notes issued to customers, deposits).

In fact, working capital can be considered one of the most important components of enterprise ownership - the efficiency of the enterprise's business

activities directly depends on its condition and efficiency of its use. The competitive struggle in market conditions presents fundamentally new conditions for the organization of current assets of the enterprise, the high level of inflation forces organizations to radically review the mechanism of managing current assets, find new opportunities for their formation and increase, and increase the efficiency of their use. Rational formation and efficient use of working capital in today's unstable conditions is a very urgent problem for many business organizations.

The importance of the selected topic is predetermined by the fact that the efficiency of the performance and financial stability of the business organizations themselves largely depend on the organization's supply of current assets, their structure and level of use. Therefore, the working capital management system, along with planning, rationing and accounting, includes a systematic analysis of its composition, dynamics and compliance with current production needs and economic activities.

Total working capital is defined as the holding of assets that are converted into cash during a maximum period of one year, which represents the organization's total investment in current assets. Where this definition ignores current liabilities, it is based on dividing assets into current assets characterized by fast movement and fixed assets characterized by slow movement; As you go through each trading cycle, the state of cash, commodities, then debt, then cash to start a new cycle (CHF international, 2011. P8).

The total working capital is of particular importance as an indicator to identify its relative importance in an activity, as the higher this relative importance, the more it is a good indicator of the lowness of this company, and on the contrary, the relative importance may be one of the negative indicators of the company's position.

Effective working capital management expresses the company's management skills in how the company manages short-term investments and financing that can affect the value of the company, as well as influence shareholder and investor analysis. According to Valipour and Jamshidi (2012) working capital efficiency is the level at which management efficiently and effectively manages working capital in order to maximize profitability.

Pooja, (2020) indicate that more efficient a company is at navigating the cash conversion cycle, the higher is its level of working capital efficiency. Pooja, (2020) argued that if the working capital is managed efficiently, the business will be able to free up cash to pay debts or for reinvestments. Enqvist, et al. (2014) argued that some of the measures used in estimating the efficiency of working capital management include current ratio which also known as the working capital ratio and measures the short-term financial health of a company, days of payables outstanding, days of inventory outstanding, days of sales outstanding, etc.

Haralayya (2021) the difference in the institutional environment determines the nature of the relationship between both profit management and the cost of capital. In addition, Wambia et al. (2020) proved that the choice of working capital management method has affected the performance of insurance companies. In addition, Sensini (2020) working capital cycle is statistically significant, but it is negatively related to the company's profitability. Masouda et al. (2020) found that not all the independent variables related to working capital management and the control variables could explain the variance in the rate of return on equity. Moreover, Wambia et al. (2020) indicate that choice of working capital management method has affected the performance of insurance companies. Also, working capital management had a positive impact on financial performance.

Banerjee et al. (2021) found a negative relationship between working capital management efficiency on the stock market performance of non-financial firms. Lastly, Sensini (2020) found that the working capital cycle is statistically significant, but it is negatively related to the company's profitability. However, the theoretical framework (presented in Figure 1.1) is inspired by the objectives of this study. By relying on previous studies and related theories and due to the fact that there are no previous studies that investigate the combination of (working capital, corporate governance and earning management) this study model was developed.

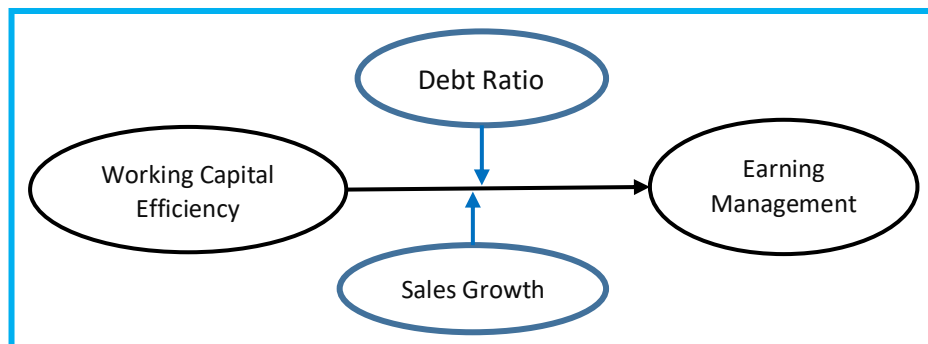


Fig (1): Theoretical Framework

There are some previous studies in literature have been tried to investigate the relationship between the working capital and earnings management. According to Banerjee et al. (2021), the study aims to explore the true nature of the impact of working capital management efficiency, measured by cash conversion cycle, on the stock market performance of non-financial firms. Haralayya (2021) examined the association between the extent of real earnings management and the cost of debt capital, he found that debt investors impose more premiums on the cost of debt capital for the firms in countries with more developed debt markets. In addition, this study indicates that the difference in the institutional environment determines the nature of the relationship between both profit management and the cost of capital according to

the country in which the company is located. For Wambia et al. (2020) who sought to explore the impact of working capital management practices on financial performance. The results proved that the choice of working capital management method has affected the performance of insurance companies. It recommended that review and adherence to appropriate staffing principles ensure the appointment of competent staff as a long-term strategy to ensure staff competency in carrying out tasks. Sensini (2020) examines the relationship between working capital efficiency and profitability. The results showed that the working capital cycle is statistically significant, but it is negatively related to the company's profitability. Masouda et al. (2020) found that not all the independent variables related to working capital management and the control variables could explain the variance in the rate of return on equity. One of the most prominent recommendations of the study was the need to increase the interest of Jordanian industrial companies in managing working capital with all its components. Prasad et al. (2019) present the working capital efficiency multiplier as a direct profitability measure for working capital management. They found that the company is less dependent on external financing. Another indicator that doubles the efficiency of working capital is the measure of the company's bargaining power and its competitive position in the market. Goker (2019) has calculated the efficiency of working capital management for 19 companies. The study showed that the difference between the working capital management index values before and after its inclusion in the corporate governance index is large, and the working capital management index values for companies decrease after their inclusion in the sustainability index. In addition, there is a conclusion that companies that aim to contribute in terms of sustainability with an environmental and social dimension should focus more on managing short-term liabilities and company assets. Afrifa et al. (2018) provided comprehensive evidence of the relationship between working capital management (WCM) and corporate performance through cash flow. Moussa (2018) showed that companies with high performance rates pay less attention to working capital management. He also revealed that stock markets in less developed economies fail to achieve optimal efficiency of working capital management. Filbeck et al. (2017) indicate that shareholders reward firms with superior working capital management strategies with higher raw and risk-adjusted-performance over longer holding periods across the economic cycle especially in bear markets cycles. Azeez (2017) investigates the relationship between working capital management and firm's profitability.

Tsagem et al. (2015) found a statistically significant relationship between debtor's collection period, payment period, cash transfer efficiency and the size of the board of directors for small and medium-sized companies on the total operating profits. It showed the importance of working capital and the size of the board of directors in small and medium companies; to achieve profits, sustainability and growth. The study recommended owners and managers of small and medium-sized companies to focus more on the effective management of their limited resources by effectively managing receivables, collection and payment periods, and cash to

improve profitability. Al-Ababneh (2014) showed a relationship between the number of collection days and the profitability of companies represented, and that there is a statistically significant relationship between the cash transfer cycle and the debt ratio with the profitability of companies represented by the return on assets ratio. The absence of a statistically significant relationship for the average payment days and the size of the company with the profitability of the companies (represented by the percentage of return on assets), and the presence of a statistically significant relationship between each of the company size and the debt ratio with the profitability of companies (represented by the percentage of return on owners' equity).

Enowi, & Brijlal (2014) found a positive relationship between the number of days of the collection period, and the number of storage days. And there is an inverse relationship between the number of days of the repayment period and the cash transfer cycle. The study recommended reducing the working capital and reducing the cash transfer cycle to increase the company's profitability and value. Bousaha (2012) confirmed that there is no relationship between the cash transfer cycle and the profitability of Jordanian industrial companies. The study recommended that Jordanian industrial companies work to reduce the cash transfer cycle to reduce the financing needs of working capital. Radi (2009) confirmed that there is a significant negative correlation between the working capital management variables and the company's profitability. The study also indicated that there is a significant negative correlation between liquidity and profitability in the study sample companies, and there is a positive significant correlation between the company's size and its profitability. In addition, there is a significant negative correlation between the financial leverage ratio of the company and its profitability. The study recommended the need to reduce the time period for the cash transfer cycle.

Related Theories

Boisjoly, et al. (2020) stated that there are three theories of working capital management, conservative approach: the company keep a large amount of current assets in relations to the total assets of the company. For financing of working capital, aggressive policy implies that current liabilities are maintained in a greater portion as compared to long-term debts. High level of current liabilities requires more resources to be in liquid form to pay back debts earlier. The implication of this approach is that it yields a lower expected profitability resulting in a lower risk. This defensive policy will also increase the company's net working capital situation but the firm will be short of funds to be used in other productive sectors. Aggressive approach: the company holds high levels of fixed assets and low investment in current assets may generate more profits for a firm. The implication of the offensive policy is that it yields higher profitability resulting in a higher risk of insufficient funds for daily operations and for the payment of short-term debts and lower working capital. Moderate approach: This balanced strategy minimizes the risk that the company will be unable to pay off its

matured obligations. At this limit, a company could attempt to match exactly the maturity structure of its assets and liabilities. This policy is considered an equilibrium policy providing the best development of profitability and liquidity financial goals.

Stakeholder Theory

The father of the stakeholder concept (2004) defined stakeholders as “those vital groups that seek the survival and success of the company”. The supporters of stakeholder theory argued that if companies do not take into account the interests of all stakeholders, they cannot justify their privileges in society. In the long run, companies that do not protect the interests of all stakeholders will ultimately hurt their shareholders. Therefore, according to the stakeholder theory, the benefits of the shareholders will be maximized only when it is aimed to maximize the interests of all stakeholders (Yıldırım, 2007). Also, the purpose of business is to produce as much value for stakeholders as possible, and as a result, executives must align the interests of shareholders, consumers, suppliers, employees, and communities in order to achieve long-term success and sustainability (lexicon ft. com). However, the emergence of the stakeholder theory word is since the concept of stakeholders was limited only to the owners of shareholders. The relationship between shareholders and managers is called the problem agency, which may cause the emergence of an interest conflict between management and owners because of different directions, where the goals of management and the objectives of the owners differ, as management seeks to maximize value, while owners want to maximize earning ability.

Black (2001) stated that for capital markets to be strong, minority shareholders must have sufficient knowledge of the business activities. In addition, the importance of establishing legal and institutional structures is underlined in order to prevent minority shareholders from being victimized by company managers and large shareholders and to prevent decisions that will reduce the value of their investments (Black, 2001). In order to achieve this, businesses must have a transparent management and present all information that may affect the decisions of stakeholders in complete, timely, realistic and reliable ways (Zengin and Yılmaz, 2017: 688). If the requirements of the transparency principle are not followed, asymmetrical information will be created in the market. “Accountability” principle from corporate governance concepts; It expresses the obligation of the board members of the company to be accountable to the shareholders of the company for all activities and practices (Kalkan and Arparslan, 2009; Yılmaz and Kaya, 2014). This term is generally defined as “a person making a statement against another authority because of his actions” (Sözen, 2005: 87). In terms of corporate governance, accountability means that a manager or group in the enterprise responds and discloses to all stakeholders inside and outside the enterprise for the activities and transactions (Kluvers and Tippett, 2010: 47).

DISCUSSION

This study was conducted in order to examine the efficiency of working capital and profit management in Jordan with the presence of the mediating role of sales growth. Working capital efficiency is the level at which management efficiently and effectively manages working capital in order to maximize profitability (Valipour and Jamshidi, 2012). According to Haralayya (2021), the difference in the institutional environment determines the nature of the relationship between profit management and the cost of capital. Sensini (2020) reports that the working capital cycle is statistically significant but negatively correlated with the company's profitability. Musa (2018) explained that stock markets in less developed economies fail to achieve optimal efficiency in working capital management.

As for sales growth, Tsagem et al. (2015) highlight the importance of effective management of debtors, collection and payment periods, and cash to improve profitability. Al-Ababneh (2014) clarified a statistically significant relationship between the cash transfer cycle and the debt ratio, with corporate profitability represented by return on assets. Enowi and Brijlal (2014) found it important to reduce working capital and reduce the cash transfer cycle to increase company profitability and value.

Thus, previous studies summarize that there is a negative relationship between working capital management variables and company profitability. It is important to manage working capital in companies by reducing the volume of inventory in a manner that is compatible with the volume of the company's activity and to ensure that its operations are not interrupted; the period for collecting receivables is reduced as much as possible in a way that does not affect the company's relationship with customers; and to increase the payment period as much as possible in a way that does not affect the company's relationship with suppliers. There is an effect of sales growth on profitability. Therefore, it is important to pay attention to sales growth as a factor that has a positive impact on managing capital and increasing profitability.

CONCLUSION

There is a knowledge gap in the relationship between working capital management and earnings management in terms of corporate governance. The importance of combining working capital management with profit management in terms of corporate governance is to delve more deeply into the issue of current assets and current liabilities and to use working capital management in a company to maximize profit. By addressing these issues, among others, the study will provide Arab and Jordanian libraries, in particular, with relevant studies related to working capital efficiency and corporate performance gains. This contributes to strengthening the role

of the Amman Stock Exchange and the countries of the Middle East. This research focuses on determining the impact of working capital efficiency and corporate performance gains. The results will help decision makers to understand corporate performance gains and ways to improve their performance, in addition to contributing to improving the quality of financial reports, which will result in more reliable and accurate reports for data users, decision makers, and shareholders. The results may be suitable for researchers to know in detail the efficiency of working capital and its dimensions. The current study may also provide tips for Jordanian companies to benefit from the efficiency of working capital in gaining the performance they need. The results may be appropriate for managers and accountants in Jordanian companies. Therefore, the value of this study stems from the following scientific and practical considerations: This draws attention to the efficiency of working capital in enhancing the performance of Jordanian companies.

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DEATH KHAIRAT MONEY SCHEME (DKMS) MODEL: ITS PRACTICE AND APPLICATION IN THE STATE OF MALACCA

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Abstract

The Death Khairat Money Scheme (DKMS) is a matter that is no stranger to most of the Muslim community. This DKMS is a noble practice that has existed for ages in the Malay community in Malaysia. Therefore, a study on implementing the DKMS system in the state of Malacca has been carried out. Literature review and interview methods have been applied in this study. The study's results found that implementing DKMS among the selected mosques differs from a management point of view. As a result, the diversity of DKMS management methods in mosque institutions is high. Therefore, it is hoped that a more in-depth and extensive study can be done so that data collection on the management of DKMS in mosque institutions can be perfected for future benefits.

Keywords: The Death Khairat Money Scheme (DKMS), the Malay community, mosque institutions, Malacca, management.

INTRODUCTION

According to the second edition of the Kamus Pelajar Bahasa Melayu dictionary, a scheme is a methodical plan constructed to accomplish a goal or a purpose. On the other hand, in Arabic, the word "*khairat*" refers to assistance and can also be translated as "charity" (Almaany, n.d). It includes the comprehensive meaning of welfare because it is not only for charity collection from the mosque institution, but other parties are also allowed to collect and include it in the death charity fund (Ibrahim et al., 2021). Meanwhile, the word death brings meaning of a person will go through the moving process to the realm of '*barzakh*' and then to the realm of '*baqa*', according to (Abdullah, 2014), says that death is the end of a person's life in this world. As a result, the term "corpse" refers to any deceased individual who has already been received by Allah and whose burial preparations have begun. Therefore, the researchers believe

that DKMS is a plan that aims to preserve the well-being of individuals in the face of the situation of death, which is something that every single human being will invariably encounter.

Some examples of the funeral management process include things like bathing and shrouding the corpse, preparing the grave, hearse van, and driver, providing the consolation of the *'tahlil imam'* and *'talqin,'* as well as other things such as *ihsan* money or condolence money to the relevant family members (Ibrahim et al., 2021). Here is where DKMS comes into play to ensure that all the necessary processes are carried out successfully. Every process step has value, which various management parties like mosque institutions have determined. The existence of this plan is likely beneficial, even if not entirely. However, with the benefits received, to a certain extent, it can ease the burden of the deceased's family members, especially regarding managing the deceased's remains.

METHODOLOGY

This study uses qualitative research methods as the primary research design by using descriptive document analysis methods through library research such as analysis of journals and articles, as well as related websites. The researchers also do the interview method to get the latest and new data. A total of four informants were interviewed face-to-face to obtain data for this study, including the chairman of the mosque, the treasurer, and the secretary of the death *khairat* organization. In general, the conclusions of this study are derived solely from secondary sources.

RESULTS AND DISCUSSION

DKMS System Management Model

Interview research on the DKMS method was carried out in two selected mosques within the state of Malacca. These mosques were the International Airport Mosque (LTAM) in Batu Berendam and the Al-Rahmah Mosque in Taman Bukit Rambai, Kampong Bukit Kechil. The DKMS system is carried out in a manner that is distinctively different at each of these two mosques. As a result, a deeper look will be taken at the DKMS system in LTAM Mosque in its daily operations. Next, the research will be done on Al-Rahmah Mosque.

Based on interviews with the chairman of the death *khairat* of this mosque, the DKMS management at the LTAM Mosque is supervised and entrusted by the mosque entirely under the *Khairat* Management Unit and it does not involve any involvement of outsiders. The mosque has full authority over the DKMS implementation process, starting from publicity activities and advertising, money collection, and distribution.

Therefore, this system is more progressive and makes it easier for mosque management (Mansor, 2022).

DKMS System Management Model (Masjid LTAM)

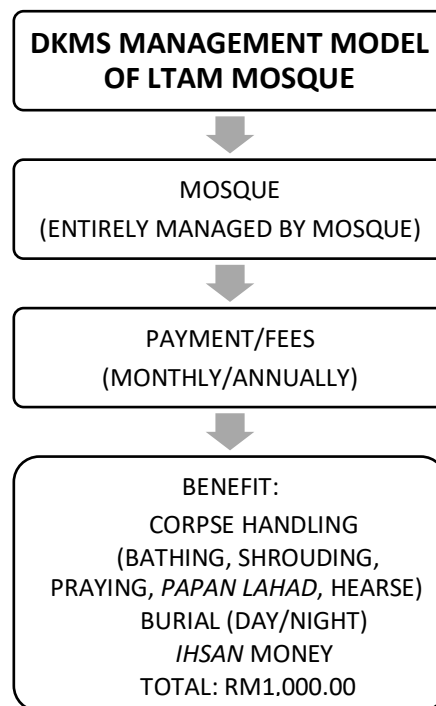


Diagram 1: The diagram above shows the flow chart of DKMS model in LTAM Mosque.

Next, the contribution rate for each member of the death charity at the LTAM Mosque is RM50 per year and is limited to five family members who live with their parents. If there are more than five family members, an additional fee of RM5 is required for each member. The death *khairat* contribution for each member will be put into the mosque's *khairat* fund that is not specifically fund of death *khairat*. This statement has already been stated in the LTAM Mosque *Khairat* form. Suppose funds are not claimed or need to be released in the current year to manage the remains, so in that case, the funds can be used to empower the development of the community in the surrounding community or '*kariah*' area. *Kariah* here means an area inhabited by residents who share a mosque or surau (Dewan Bahasa dan Pustaka, 2017). While the mosque's treasurer will only manage all transactions and activities involving money to ensure transparency in financial management.

Therefore, the contributions accumulated in the *khairat* fund are not only beneficial to the process of managing the remains, but the benefits of the contributions will grow more widely because their use is not focused only on the death charity. Therefore, it can be concluded that the members' contribution to this death charity will be used optimally as possible either in the management of the remains, the development of the community, or the welfare of the local community.

From the point of view of benefits, death *khairat* members at this mosque are eligible to receive benefits that have been set by the mosque as stated in the death *khairat* membership participation form. The benefits include bathing the corpse, shrouding the corpse and its equipment, *lahad* board, funeral prayer, funeral vehicle and driver services, the burial of the corpse, and grave digger's wages, *talqin*, and *tahlil*. The estimate for all the benefits is between RM1300 and RM1500. The management of remains now requires quite a significant expenditure, and one of the factors is due to the increasing price of goods, then the need for more individuals to perform this service. Nevertheless, this is not a ticket for the public to continue not to know about the management of remains. However, the main objective of the mosque institution towards the DKMS is to be the backbone for funeral matters in the Muslim community.

DKMS System Management Model (Masjid Al-Rahmah, Taman Bukit Rambai)

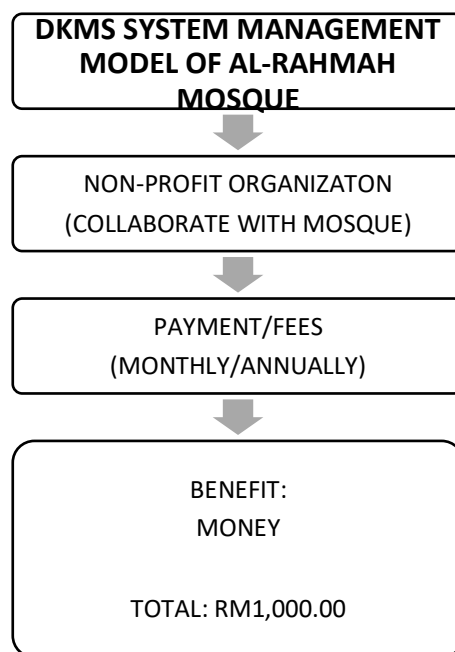


Diagram 2: The diagram above shows the flow chart of DKMS model in Al-Rahmah Mosque.

According to research information obtained by the secretary and treasurer of the Death Khairat Organization in this *kariah*, the management of DKMS at Al-Rahmah Mosque, Taman Bukit Rambai is supervised by a non-governmental organization of Kampong Bukit Kechil Death Khairat Organization, which has been registered under the Registration Department Malaysian Organization. This *khairat* organization has collaborated with the mosque from the point of view of funeral management. This means that, when a community member dies in the area, the mosque will still help manage the remains until it is finished. However, the heirs of those members must cover the expenses of managing the remains themselves. Here is the difference in the implementation of DKMS management at Al-Rahmah Mosque.

According to the Kampong Bukit Kechil Death Charity Organization Constitution for Amendment 2021, each charity member will be charged a fee of RM5, 20 percent will be used for administrative management, and the remaining 80 percent will be used for death charity assistance. The benefit that the *khairat* members will receive is in form of ringgit money, which is called death *khairat* charity money. If the member pays the monthly fee for three consecutive months, then the member's membership will expire immediately. In principle, all expenses for managing the deceased member's body must be paid off using the benefit money that the heirs have received. In addition to that, the value of death *khairat* benefits that charity members will receive are as follows:

Members: RM 1000.00

Wife: RM1000.00

Liability: RM 800.00

Dependents referred to here are unmarried daughters, sons under the age of 21, disabled children or those continuing their education (requires a confirmation letter from the relevant party), and siblings of disabled members that live together (need to submit a disabled certificate or disabled card). Next, for a member's parent or in-law who dies at the member's home or anywhere in Malaysia, the member will be given a donation of RM300 based on the membership conditions stated above. From the study above, it can be seen that the use of two different concepts in the implementation of DKMS between these two mosques still leads to one objective, which is to help facilitate the process of funeral management, whether assistance from a service or financial point of view. This shows that DKMS is a dynamic system and does not require only one method as long as the objectives of DKMS can be achieved.

Relevance of DKMS System

In Malaysia, the DKMS system is extremely important and absolutely vital. Its relevance is very high. This is due to the fact that the management of remains may be completed in a manner that is both faster and more effective thanks to the establishment of DKMS, which in turn fosters a sense of togetherness and collaboration among members of the Muslim community. Aside from that, awareness of greater preparation in the face of death can be seeded at the same time that it can help the local community by offering financial aid to the death charity fund for the common good. This is an additional way in which it can be beneficial. This is consistent with the overall philosophy and guiding principle of DKMS, which stands on the foundation of three primary principles: *sadaqah*, *hibah*, and *al-birru* (Shahbuddin & Gunardi, 2022).

CONCLUSION

In a nutshell, the study's outcomes demonstrate that different mosque institutions have different approaches to applying DKMS. This demonstrates that DKMS management techniques may be created and adapted according to the requirements of a mosque and its suitability for doing so. In order to acquire accurate data, it is strongly recommended that a more in-depth study of the DKMS model of mosque institutions in Malaysia be conducted. It can further improve the procedures and mechanisms already in place to develop the best DKMS system possible, allowing all mosque institutions in the country to coordinate it.

APPRECIATION

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EXERCISE DURING RAMADHAN (FASTING MONTH); IS IT A GOOD IDEA TO DO EXERCISE DURING THIS HOLY MONTH?

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Abstract

Till today, most people are very scepticle when performing exercise during Ramadhan month. They are thinking that this holy month we should only rest and perform ibada. One should not perform any exercise because it will affect the health condition and also the fasting performance as well. The researcher could recall when were in school day when running around the neighbourhood before iftar (breaking fast) when people in the neighbourhood started teasing the researcher outloud whether fasting or not because too much of energy to run during fasting. Taboo saying exercise is not good during fasting month has been around among mostly Muslim people in Malaysia. However, sports scientists and other health scientists have discovered the other way around that exercise during fasting month is beneficial to everyone generally. This study is using current and past literatures to identify the benefits of exercise during fasting month. The intention of this study also to debunk the taboo saying exercise is not good during fasting month. Instead of just going to Bazar Ramadhan during the holy month, why not at the same time performing exercise because it is also considered as ibada.

Keywords: *Exercise, fasting month, taboo, benefits, and ibada.*

INTRODUCTION

Every year all Muslim adults must perform the third pillar of Islam in Ramadhan month by fasting from sunrise till sunset where they are obliged to refrain from eating, drinking, smoking, oral drug intake and having intercourse with their marital partner at that period (Chtourou et al., 2012). Muslims utilise the Hijri calendar to calculate the dates of religious events like fasting and Eid celebration, which is completely independent from astronomical seasons, which indicated by the equinoxes and solstices (Parise, 2002).

All Muslims are encouraged to enhance their ibada during this month because all the heaven's gates are opened to accept all good deeds performed by them and the rewards are enourmous. Fasting also is one of the gateways to be closed to Allah SWT and to abolish the sins that were done previously (Abdul, 2015).

However, one should not neglect the health during this Ramadhan month. Even though fasting is said to be beneficial for health, it does not mean that the individual just need not to do any physical activity and stay unproductive and hoping that only fasting will do the miracle for the health's sake. It must come along with physical activity such as exercise because if 30 consecutive days without exercise in Ramadhan, it equivalent to losing four months of exercise (Noorbhai, 2013).

METHODOLOGY

In this study, references from the reputable sources from Google Scholar, ResearchGate, Science Direct, MyCite and reliable books and websites are used to recognize the health benefits to debunk the taboo when performing exercise during fasting month. Keywords from the abstract; exercise, fasting month, taboo, benefits, and are the key points in searching the relevant references.

RESULTS AND DISCUSSION

Performing exercise in the Ramadhan month has beneficial effects on body composition where it able to increase lipolysis in adipose and muscle tissue, thus it reduces the amount of body fat mass (Bassuk & Manson, 2005; Donnelly et al., 2009; Zouhal et al., 2020).

While the amount of insulin decreases and hepatic glycogen breakdown increases during fasting, it is recommended that endurance training during this condition leads to more fat consumption than the absorbtive state (De Bock et al., 2005; Horowitz et al., 1997; Maughan et al., 2010).

Another study found that cardio-respiratory responses to sub-maximal exercise were small during Ramadhan, with no significant changes in maximal exercise capacity, percentage of VO₂ max, treadmill walking efficiency, body weight, or body composition (skinfolds) associated with Ramadhan fasting for sedentary people who engage in heavy aerobic exercise (Ramadan & Barac-Nieto, 2000).

For the appropriate time to perform the exercise, (Aziz et al., 2012) had underlined that the best time to exercise throughout Ramadhan is at 9:00 p.m. Since fasting athletes were able to refuel and rehydrate by eating their pre-prepared iftar (breaking fast) meals at approximately at 7.15 p.m. Meanwhile, (Bouguerra et al., 2017) concluded that training in the afternoon between 2:00 and 4:00 p.m. during Ramadhan can be more effectively to improve aerobic performance compared to morning or evening training due to the normal day-to-day of sport performance, improvement in blood flow, a greater broken down of glycogen and more free fatty acids are used as a fuel substance during afternoon exercise sessions.

Fasting for 30 days without exercise results in a loss of strength and fitness regardless of whether they train at least three days a week for the previous 11 months, but skipping exercise during Ramadhan will put them at a disadvantage in terms of cardiovascular and resistance adaptations (Noorbhai, 2013).

People with chronic diseases such as diabetes should take caution when planning to perform exercise during fasting month. They should first consult with their respective medical officer to determine whether they are capable to do exercise or vice versa (Lim, 2021). This is because those with type 1 diabetes are not encouraged to exercise at all as this can hinder their glucose levels profusely where the blood sugar (glucose) level is lower than the standard range, which is known as hypoglycemia (Siahkollah & Azizi, 2003). But for those who have diabetes type 2, they still can perform the exercise at low intensity for 35 minutes focusing more on aerobic and strength training (Noorbhai, 2013). Yet, they are still required to get advice from their respective medical officer.

During the month of Ramadhan, Muslim athletes reportedly experience an increase in subjective symptoms of malaise, lethargy, and exhaustion, which impairs their ability to perform at their peak, particularly in high-intensity exercise due to dehydration, daily food restriction consumption, and the change of the sleep-wake cycle (Kaarud et al., 2016; Roky et al., 2004).

CONCLUSION

Even though most research have highlighted the benefits of exercise during Ramadhan, it does not mean during iftar (breaking fast) we should eat a lot. We should eat moderately and take only balance and nutritious food during iftar. As mentioned in Al-Quran chapter Al-Baqarah verse 168 and 172 say as follows:

"O mankind, eat from whatever is on earth [that is] lawful and good and do not follow the footsteps of Satan. Indeed, he is to you a clear enemy."

(Al-Baqarah: verse 168)

"O you who have Faith! Eat of the good things We have provided you with, and be grateful to Allah, if Him it is you worship."

(Al-Baqarah: verse 172)

Prophet Muhammad (PBUH) in his teaching also mentioned about against overeating:

The Prophet (peace and blessings of Allah be upon him) said: The son of Adam does not fill any vessel worse than his stomach. It is sufficient for the son of Adam to eat a few mouthfuls to keep him going. If he must do that (fill his stomach), then let him fill one third with food, one third with drink, and one third with air".

Exercise during Ramadhan month enhances lipolysis in adipose tissue while simultaneously boosting peripheral fat oxidation, resulting in greater fat usage and reductions in body weight, lean body mass, and fat content in both trained and untrained people (Zouhal et al., 2020).

However, there are several disputes over research study results continues to grow due to a variety of factors such as diversity in Ramadhan culture, dietary composition, daily lifestyle, atmospheric conditions, altitude, length of day, and performance test selection. As mentioned earlier by (Aziz et al., 2012) and (Bouguerra et al., 2017), where there are differences in the best time to perform the exercise for maximum performance. More indepth research needs to be done to understand more about these phenomena such as the appropriate time, effects or impacts relating to age or gender or diseases, type of exercise performed, and on cognitive and affective functions. Furthermore, there seems to be a lacking of detailed understanding relating physiological and performance effects of athletes fasting throughout Ramadhan (Fallah, 2010).

People with chronic diseases must take cautious care when planning to perform exercise during Ramadhan month and must consult with their medical officer to determine the appropriate exercise that can be done by them. This is because they are the expert about the level of health of their patients and know what the best for them.

General guidelines can be followed when performing exercise during Ramadhan and are as stated below:

- i. Stay rehydrated
- ii. Do not overtrain/less intensity
- iii. Switch from cardio to strength training
- iv. Increase rest period
- v. Shorter length of exercise
- vi. Sufficient nutrition intake (pre-fasting meal/suhoor)
- vii. Stop when feeling exhausted

Finally, the prevalent of saying that exercise is not good during Ramadhan is absolutely a taboo. Except for those who are suffering chronic diseases or other factors that would stop them from doing exercise, the general population may find that there are so many benefits performing exercise during Ramadhan. Of course, it would be very challenging to exercise during Ramadhan. However, one must understand that this holy month is not only holding us from eating or drinking, but also an ibada that teaches us to be patience, sacrifice, and exercise during Ramadhan is the willpower to overcome the challenges given to us by Allah SWT.

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THE INTEGRATION OF MICRO TAKAFUL AND TEMPORARY WAQF FOR THE UNDERSERVED POPULATION IN MALAYSIA

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Abstract

Micro takaful has become a critical strategy to mitigate risks and overcome poverty among low-income populations in a community. However, micro takaful's low penetration rate seems worrying due to the recommendation to minimise its management costs. This paper aims to develop a financing model/framework by integrating micro takaful and temporary waqf to benefit the underserved population in Malaysia. This research uses the content analysis method from relevant literature to derive a suitable financing framework based on temporary waqf applications. As a result, this study suggests an integrated micro takaful and temporary waqf financing framework to solve the existing problems. It is hoped that this work will benefit the development of micro takaful financing strategies and boost its offerings in the future.

Keywords: *Micro takaful, temporary waqf, underserved population, framework, B40*

INTRODUCTION

Background

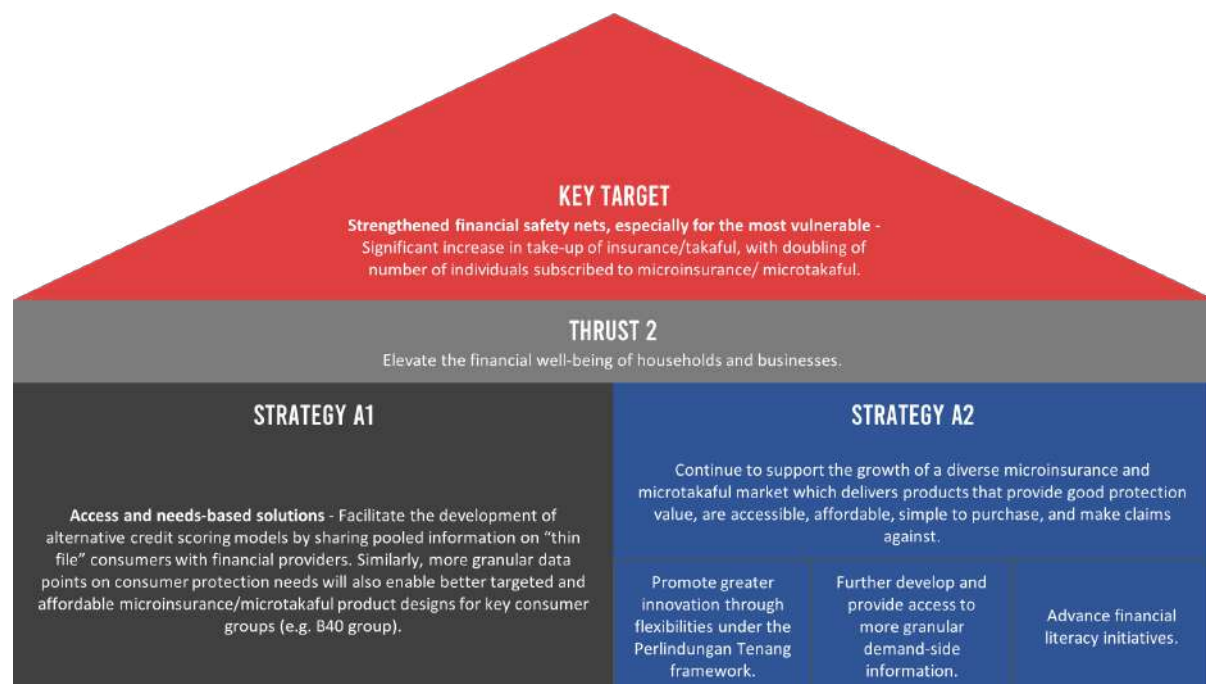
Micro takaful has been designed to provide affordable health and financial protection to the unserved and underserved population. Starting from 2011, the Central Bank of Malaysia (BNM) encouraged takaful operators to develop micro takaful products in its Financial Sector Blueprint 2011-2020 by stating (Bank Negara Malaysia, 2011):

Recommendation 2.3.2

iii. "Facilitating the insurance and takaful industry to develop microinsurance and microtakaful products, which provide the underserved with adequate financial protection against unexpected adverse events in a cost-effective, accessible and easy-to-understand manner through a facilitative regulatory environment, strengthened delivery capacity, increased market awareness and enhanced consumer literacy."

Later in the Financial Sector Blueprint 2022-2026, the designs and suggestions towards micro takaful initiatives have become more comprehensive due to the development

of the Perlindungan Tenang programme since 2017. The figure below summarises the key target of the micro takaful initiative in 2026 as proposed by BNM:



Source: Excerpted from Bank Negara Malaysia (2022)

Figure 1. The key target, thrust and strategies for the micro takaful/microinsurance initiative of BNM

Today, most micro takaful initiatives are focused on the government's initiatives (Microinsurance Network, 2021), such as mySalam⁶ and Perlindungan Tenang Vouchers (PTV) through subsidies for micro takaful subscriptions. One of the main issues arising from today's micro takaful offerings is its low take-up among the B40 group (Ishak, 2020), resulting from the financial constraints for promotion activities to the targeted markets (Kamal et al., 2022). Mukherjee et al. (2013) reported that Malaysia's microinsurance (which was highly contributed by micro takaful products) coverage in 2012 was only 3.71%. Although there was no recent data on micro takaful penetration in Malaysia (in the previous five years), micro takaful development worldwide, particularly in Malaysia, is still in its infancy phase (Microinsurance Network, 2021; Salleh & Padzim, 2018).

Apart from that, micro takaful operators face a huge amount of operational costs, including 1) treatment costs; 2) an unbalanced ratio of contribution funds and

⁶ The mySalam national health protection scheme is an initiative started by the Government that aims to provide 6.8 million with free takaful protection. mySalam recipients are coming selected from Bantuan Sara Hidup recipients, which divided into three categories: a) aged between 18 and 65 and their spouses; b) single individuals aged between 40 and 65 and earning less than RM24,000 per annum; and 3) OKU individuals aged between 18 and 65 and earning less than RM24,000 per annum. mySalam benefits are including a one-time RM8,000 cash payout upon diagnosis of one of the 45 Critical Illnesses and RM50 daily hospitalisation income replacement up to RM700 per annum at any government, military or university hospitals.

claims; 3) promotion and advertising costs; and 4) shariah-compliant management costs in its offering to the poor population (H. 'Azeemi A. Thaidi et al., 2021). These problems emerge from a low contribution fee in the micro takaful scheme, which generates low profit for micro takaful operators. Consequently, it may cause a deficit risk to takaful providers and negatively affect the industries' sustainability in the future. To encounter the problem, Bank Negara Malaysia (2022) suggests that micro takaful schemes must be developed with the cooperation of both government and private sectors to boost additional funds for micro takaful operations and expand the protection coverage to the participants.

This research suggests the integration of micro takaful and temporary waqf (*al-waqf al-muaqqat*) instruments to overcome the financial challenges of micro takaful operations. As an established philanthropic tool in Islamic social finance, waqf seems to fulfil its intention in financing micro takaful schemes, where the funds are primarily collected to enhance economic and social development (Kusumaningtias, 2019), as well as eradicate poverty in the society (H. 'Azeemi A. Thaidi et al., 2021). It is also worth mentioning that the discussions and studies about temporary waqf are getting more attention lately, despite having some legislation restrictions (Rahman et al., 2021).

For instance, temporary waqf has been chosen as a practical financial instrument in iTEKAD CIMB Islamic Rider Entrepreneur⁷ programme, which was initiated with the collaboration of Yayasan Waqaf Malaysia (YWM), CIMB Islamic Bank Berhad (CIMB Islamic), Yayasan Belia Malaysia (YBM), Taylor's University and Food Panda (Yayasan Waqaf Malaysia, n.d.). The development of temporary waqf today may occur because of its unique characteristics, such as being flexible and easier to manage for social development purposes, rather than the permanent waqf (*al-waqf al-muabbad*) (H. 'Azeemi A. Thaidi et al., 2021). More discussions on its prospects are elaborated on later in this paper.

OBJECTIVE

This paper aims to discover a new potential financing model by integrating micro takaful and temporary waqf to promote the development of micro takaful offerings in Malaysia. It is done in this research through analysing previous studies related to the model of micro takaful financing through zakat and waqf funds, as well as the discussions regarding the application of temporary waqf instruments.

⁷ In this programme, cash waqf contributions are collected from the society and will be used to buy motorcycles as physical assets of waqf. The motorcycles will be given to the eligible recipients from B40 group of youths to work as Food Panda riders on a 12-month contract basis. After completed the contract period of a year, the motorcycles are then gifted (*hibah*) to the riders by transferring the ownership.

METHODOLOGY

This qualitative research analyses the discussion related to the micro takaful financing model, the Islamic jurisprudence views related to temporary waqf and the potential of its implementation in Malaysia. The method used to achieve this study's purpose is content analysis with inductive and deductive approaches. The research was conducted on micro takaful policy documents, particularly those issued by the Central Bank of Malaysia, academic journal articles, theses, online forums, official websites and local newspapers. Furthermore, the review of micro takaful financing models using existing zakat and waqf funds is the main focus of this study in developing a micro takaful and temporary waqf integration model, which will be the aim of the study conducted.

LITERATURE REVIEW

Related literature on the study is organised into several themes:

Concept of micro takaful

Bank Negara Malaysia (2016) defines micro takaful as "*a takaful product that is designed to respond to the financial protection needs of low-income households*". The first part of the definition (*a takaful product that is designed to respond to the financial protection needs*) manifests a takaful product's concern which is to provide financial protection to takaful participants during uncertainties and risks in life. It is done in takaful when the risk is shared collectively among a group of people, whereas they are entitled to an agreed amount of payment as their takaful contributions. The contributions, regarded as donations in takaful, are collected into a fund to provide financial assistance to any member of the group suffering a loss (Htay et al., 2015).

The second part of the definition (*of low-income households*) explains a unique attribute that makes a takaful product 'micro' by targeting low-income households as its participants. Therefore, Hasim (2014) and Sanrego (2019) define micro takaful as shariah-based takaful protection that has been modified with an affordable contribution amount to suit the condition of underprivileged individuals. Furthermore, Bank Negara Malaysia (2016) adds specific principles of micro takaful products offered in the market as 1) easy to understand; 2) maximisation of protection; 3) affordable cost for lower income group; and 4) simplified claim process.

Compared to takaful, micro takaful shows a closer meaning to the essence of takaful (mutual assistance) and *ta'awun* (mutual cooperation) when it encounters the most vulnerable segment of people, thus the most in need of protection towards unexpected adverse events (Bank Negara Malaysia, 2016; Brugnani, 2013; Hasim, 2014b; Htay et al., 2015).

Strategies for financing micro takaful schemes

In suggesting a good financing instrument for micro takaful, it becomes an important step to identify the existing strategies in funding micro takaful as proposed by academicians and researchers, as well as its current practice in the industry. The idea of utilising zakat and waqf funds for micro takaful is among the prominent suggestions in the previous literature when zakat and waqf funds seem to be inseparably connected with the poor population as the target market of micro takaful offerings (Brugnoni, 2013; Hasim, 2014a, 2014b; Hassan et al., 2020; H.' Azeemi A. Thaidi, Nazarie, et al., 2021; H.' Azeemi A. Thaidi, Salleh, et al., 2021; Zakaria et al., 2019).

According to Brugnoni (2013), the zakat fund can be used to pay contribution fees of micro takaful policies for the poor, focusing on the eligible zakat recipients who do not have sufficient income to contribute. In addition, Hasim (2014a) also recommends utilising the zakat fund to manage initial expenses, research and development of micro takaful schemes. This recommendation is worth considering as micro takaful operators have limitations on the promotional and operational costs in micro takaful offerings (Kamal et al., 2022; H.' Azeemi A. Thaidi et al., 2019). Besides, the usage of zakat fund in micro takaful offerings to the poor have the potential to subsidise micro takaful contribution fees, improve shariah-compliant governance and build up the image of zakat institution in Malaysia (Hasim, 2014a; Hassan et al., 2020; H.' Azeemi A. Thaidi, Salleh, et al., 2021).

As to how the zakat fund works, waqf is also being suggested to finance the micro takaful scheme by funding the participants' contribution fees. In micro takaful-waqf model suggested by Zakaria et al. (2019), a waqf pool fund is initiated by a micro takaful operator to collect contribution payment from the participants and other sources of donations. The fund will be managed by a micro takaful operator through *wakalah* contract but remain an independent entity with its self-ownership, recognised by the law. Then, the collected waqf fund will be invested, and the profit from the investment shall return to the waqf pool and distributed to the parties involved according to the investment (*mudharabah*) contract. Hasim (2014a) suggests a model where the waqf fund will be used as an additional fund into a cooperative common pool through *qard* (agreement of lending money by a lender to a borrower), which is managed by takaful operators. Takaful operators shall repay the allocated amount from the waqf fund after gaining profit from investment activities within the time stated.

The existing works of the literature suggest micro takaful financing models through zakat and waqf fund to enhance its implementation. Still, implementing temporary waqf as a financing instrument is very infrequent. Therefore, this study will try to bring out a new financing model by integrating micro takaful and temporary waqf to protect the underserved population.

Concept of temporary waqf

Temporary waqf in Islamic jurisprudence is derived from the discussion on the types of waqf, based on the duration of waqf, whether it is temporary or perpetuity. It is the view of the minority among the scholars who permit the implementation of temporary waqf, which is also the selected view of the Maliki school and some of the Hanafis scholars, particularly Abu Yusuf, except for waqf on the mosque and cemetery (Kahf, n.d.). The discussion of temporary waqf is about a stated period of waqf set by the founder (*al-waqif*), where the property still exists and is beneficial even though the period has expired. Once the period ends, the waqf status on the property also ends with it (Ab Rahman & Amanullah, 2017). It is contrary to the concept that a waqf property was destroyed within a certain period. It remains a permanent waqf even if the property is destroyed for some time (Kahf, n.d.).

Ab Rahman and Amanullah (2017) and Kahf (n.d.) explain the distinct advantages possessed by temporary waqf instruments compared to permanent waqf, namely: 1) it is easier to manage; 2) may give more options to the founder to endow their property according to their preferences; 3) can reduce the numerous unmanageable waqf properties; and 4) able to provide benefits to a broader group of recipients. It can be shown through the recommendations of these studies, which emphasise that waqf founders should do specific waqf (*waqf khas*) and waqf to the descendants (*waqf zurri*) temporarily. As a result, the waqf status will be converted to a general type (*waqf khairi 'am*) after the end of the waqf period. Apart from that, returning the waqf properties to the founders after the expiry of the waqf period is also seen to have the potential to boost economic development through investment and interest-free loans (*qard al-hasan*) activities.

In the interviews conducted by Ab Rahman and Amanullah (2017) with several representatives of the waqf management from selected states of the State Islamic Religious Council (SIRC), they stated the problem of the currency's depreciation over time. The issue arises when the value of cash waqf may reduce if they are not converted into physical assets. This problem can be solved using cash waqf in the form of shares in the stock market, small-enterprise loans and investment activities. The implementation also coincides with the views of Maliki and Hanbali scholars. This study will identify the suitable exercise of temporary waqf instruments in the micro takaful industry.

RESULTS AND DISCUSSION

This study found a great potential for implementing micro takaful and temporary waqf integration in promoting the growth of micro takaful supply and demand

between the takaful industry and low-income communities, per the guidelines set by banks and federal/state laws. The main objective of this financing model is to help the low-income group to obtain micro takaful coverage to cope with the uncertainties of life. Therefore, the takaful operator will create a waqf trust fund through a temporary cash waqf channelled from the waqf founders (*al-waqif*) to the SIRC. The fund is used to obtain micro takaful policies and pay micro takaful claims for the low-income group.

Next, the problem of non-widespread promotion due to funding limitations, as noted in the study of Kamal et al. (2022) can be solved by maximising the role of SIRC and its subsidiary companies under its management in reaching out and taking care of the needy, especially the poor (*faqir*) and impoverished (*miskin*). Such cooperation is critical to encourage micro takaful penetration rates, mainly through federal and state government agencies (Bank Negara Malaysia, 2016; Hasim, 2014a; Kamal et al., 2022).

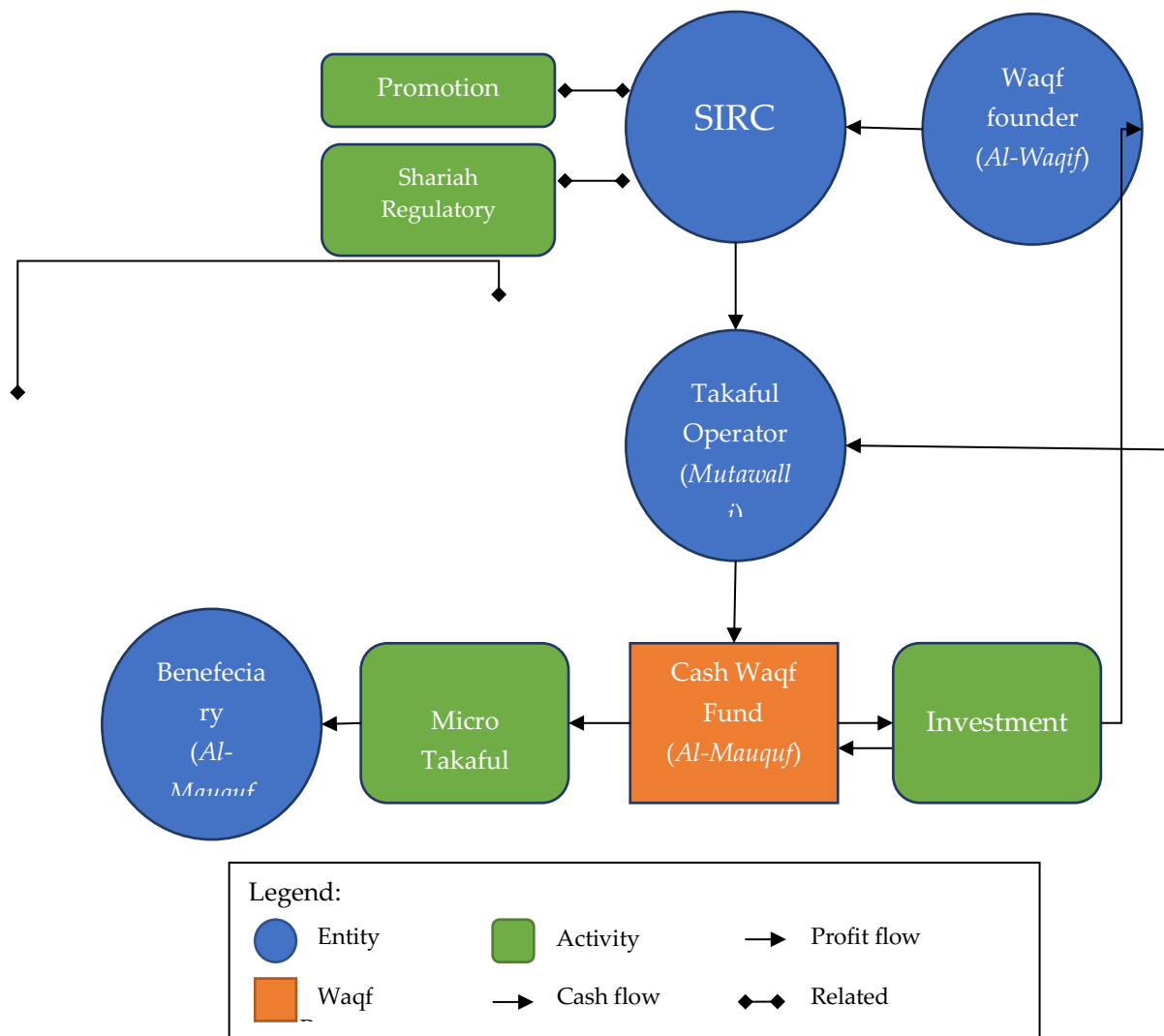
Through the temporary waqf instrument, it is seen to attract more contributors among individuals and companies. This benefit comes when waqf founders can design waqf contributions given according to their wishes (Kahf, n.d.). For example, suppose a founder wants to endow his wealth in this project but at the same time only wants a return of 50% of the total waqf property given for the needs of his children. In that case, he can do so by endowing half of the total waqf permanently and another half temporarily. Then, the amount of waqf savings will be invested, and the profits from the investment activities will be returned to the founders or their heirs under the stipulated agreement – such as once at the end of each year after the investment period reaches maturity.

With the involvement of SIRC in this financing model, it can also increase the founders' trust to contribute to the micro takaful-temporary waqf fund, which will be managed by an established religious authority of the state. In addition, it may convince the underprivileged group to subscribe to the micro takaful protection scheme even if they have to pay little contributions to get it. This situation corresponds with the report issued by Bank Negara Malaysia (2016), which stated that participants' trust and financial capability are among the dominant factors for this group of people to participate in takaful protection schemes compared to their level of knowledge about takaful. Thus, the lack of demand for micro takaful products can be resolved.

Integrating micro takaful and temporary waqf can also reduce the cost of shariah-compliant governance management if the task can be given to SIRC as a body with a group of experts in shariah governance and Islamic finance. As a result, such a financing model is in line with Bank Negara Malaysia's recommendation to provide a micro takaful product that minimises costs but maximises the protection of low-income communities (Bank Negara Malaysia, 2016). Figure 2 below shows a proposed

framework on the integration of micro takaful and temporary waqf generated from previous literature suggestions.

Figure 2. The Integration of Micro Takaful and Temporary Waqf Financing Framework



In this framework, temporary cash waqf funds will be collected from waqf founders via SIRC and channelled to takaful operators to form a pooling cash waqf fund. The takaful operator will manage the fund for micro takaful underwriting and claim purposes using *wakalah* contract while initiating investment activities using *mudharabah* contract. The cash waqf fund has its self-ownership, which binds with existing law, as Zakaria et al. (2019) proposed. Any profit initiated from the investment of the fund will be allocated to: 1) the cash waqf fund itself; 2) the takaful operator based on *wakalah* and *mudharabah* agreement; and 3) the waqf founder (*al-waqif*) as a return based on temporary waqf principle. As mentioned, SIRC will monitor shariah governance and regulations in this framework and promote micro

takaful to the low-income group segment. Targeting micro takaful participants by segmenting them into specific groups, such as the *faqir* and *miskin* that fall under the supervision of SIRC is one of the critical strategies to boost micro takaful uptake among the underserved population (Bank Negara Malaysia, 2016; Kamal et al., 2022; mySalam, n.d.).

CONCLUSION

In conclusion, more models/frameworks are needed to encourage micro takaful penetration rates among the underserved population in Malaysia. It is due to cost limitations in its operations that require an injection of funds from strategic sources. Here, temporary waqf is seen as a potential financing instrument to achieve the means through developing a framework for integrating micro takaful and temporary waqf. Some suggestions for further research are needed as follows:

- a) A study that identifies the validity of this integration framework from legal and takaful business perspectives.
- b) A study on the appropriate period for implementing temporary waqf instruments in this framework.
- c) A study on the deficit risk towards waqf trust fund in the process of implementing this integration model.

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A COMPARISON ANALYSIS TOOLS OF MANAGING BUDGET PLANNER FOR UNIVERSITY STUDENT WITH INAQ USING MOBILE APPLICATION

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Abstract

Managing of monetary is crucial and important in order to produce a quality budget especially for student in university. Budget management that use mobile application is an essential process must be applied by student to manage their budget income and expenses as wells as iNAQ integration. Therefore, this paper aims to provides gap of study for existing work development of managing budgeting planner among student that exist in market for commercial and for research purposes. The results of the findings is reported from review and analysis of different studies that provides the strengths and weaknesses of the features and utility are also presented. This resulted to provide further understanding of the gaps and weaknesses of each research. This study is concluded that these researches are still lacking and need further improvements.

Keywords: financial planner, budgeting, mobile application.

INTRODUCTION

Managing of monetary is important for each person to ensure they can use money as planned. As university student, they can receive money from parents or other sources either weekly and/or monthly as their pocket money. Student spends pocket money to purchase goods and things including the meals, etc. This is for sure they did not use the application that can monitor and manage the cashflow and expenses and resulted they unaware they have spend the money as unexpected. Thus, failure to manage their money lead mental health problem including stress, not focus during teaching and learning, etc.

Furthermore, the managing cashflow is important to muslim student where they can expense the exceed money with the *Sedekah*. This can be derived how the application and the islamic financial literacy is applied to contribute the some beneficial to student. Therefore, managing the budget is essential process in development of software application for university student in embedded islamic components.

In this paper, a review on existing works and tool support for monitoring and managing budget planner among university student. The paper is organized as follows: Section 2 describes the background of study. This is followed by Section 3,

survey literature. Then, Section 4 illustrates the comparison tools while Section 5 depicted to the result of the overall findings that presents a description of selected tools for monitoring and managing budget or financial planner application available in the market together with its comparison analysis. Lastly, Section 6 is of this paper ends with a conclusion and future work.

RESEARCH BACKGROUND

This section presents the budgeting, mobile application and iNAQ of this study.

Budgeting

Budgets are management tools university recognized for their ability to support planning and efficient management of resources and activities in economic entities (Lidia, 2014). It helps us to evaluate the financial resources, assist in control of the spending, and monitor the progress so that the personnel or organization can successfully achieve the financial goals with less effort (Hoe, 2020).

Mobile Application

Mobile Application is a software application designed to run on mobile devices use a recent technological innovation. Mobile applications have appeared because of the convergence of media, information technology, Internet, and advanced technologies (Phongtraychack & Dolgaya, 2018). Using mobile application able to monitor the activities including kindergartens activities (Yusop et al., 2022) and etc.

iNAQ

iNaQ is the concept of Naqli and Aqli Knowledge Integration as the manifestation of Universiti Sains Islam Malaysia (USIM)'s philosophy. This integration of Naqli and Aqli knowledge combined with noble qualities are the thrust in nurturing a noble generation and a knowledgeable society (Hashim et al., 2019). In other words, Naqli is to reveal the source of knowledge that comes from the Quran and Sunnah whereas Aqli is a conventional knowledge.

SURVEY OF LITERATURE REVIEW

There have been several works on monitoring budget planner including the managing process. In this section, we presents the existing works approach of tools survey and other research for the managing budget planner among student.

Researcher in (Hoe, 2020) developed an application advance budgeting mobile application that provide a good solution for the user to manage their financial resources. The features of this application developed to perform budgeting with the assist from geo location services and image recognition. This application also provided suggestions product based on targeted budget. However, the application developed focused on the budget and certain features.

Researcher in (Priyantono, 2019) developed an application to ease for people to plan their finances and compare the cheapest prices in several online stores. An application developed using the utilization of Firebase Cloud Messaging (FCM). Based on their findings of study, they found that the need for an application that can plan finances and compare the lowest prices at online stores. However, the application provides feature limited for finance and compare the lowest only.

Researcher in (Azhar, 2020) develop a smart mobile money manager application for students Sekolah Menengah Sains Teluk Intan (SEMESTI). The purpose of developed this application is to help the students to learn how to manage money properly. The features covered for development of applications such as include money manager, application development, manage expense, gamification and user interfaces development. However, the application developed focusing on student for secodnary school.

Researcher in (Hezretov, 2018) developed a budget tracking application that supports for native mobile application using powerful cross platform library React Native for high performance. The purpose of developing this application to tracking income and expenses. The mobile application developed is free that compatible for Android and iOS devices. However, the application developed is general not to specific usage for students.

Tool offered by Anishu (Anishu, n.d.) called as Homebudget that searching expense entries, bill reminders, income, budgets as well as generate the report via email and under WIFI environment. This application also provide the family synchronization that could sync each family member. This application support for android and ios application.

Researcher in (PixelRush, n.d.) developed called 1Money as an application for quickly tracking plan the income and expense as provide the chart information for user. Here, the expense including the restaurants, transport, groceries, shopping, etc. Thus, this application provides a feature for control amount and set daily notification for transaction per day. However, this application can be improved with certain features which provide engagement with users.

Tool developed by AppFer (AppFer, n.d.) called as FastBudget is designed with customizable overview page which enables the user to visualise the flow of their money. This mobile application allows users to visualize their status financial status. This application integrated with the banking account and also provide the features such as safe, wallet and debit card as well as generate the report.

RESULT

The seven existing works related to development mobile application in monitoring as managing the budget among university student is compared. The comparison features based on name of Mobile apps and purposes in monitoring budget planner and tracking for existing in market and research as illustrated in Table 1.

Table 1: Comparison of existing works approach for the managing budget planner in existing market and research

Author(s)	Tools Name							Platform	
	Mobi le Geob ased Budg et Plan ner and Calc ulato r	S E M E S T I	Fi na nc ial Tr ac ki ng A pp	Bud get Tra cki ng Ap ps	H o m eb u dg et	1 M o n e y	F a s t B u d g e t	W e b	M o b il e A p p
(Hoe, 2020)	✓								✓
(Azhar, 2020)		✓							✓
(Priyantono, 2019)			✓						✓
(Hezretov, 2018)				✓					✓
Anishu					✓				✓
PixelRush						✓			✓
AppFer							✓		✓
Total	1	1	1	1	1	1	1		7

Based on these analyses, they demonstrate the limitations of managing budget among university student. Tools contributes highest studies with seven studies. However, the tools for develop mobile application with islamic components is lacking and very limited for managing budgeting of university student.

DISCUSSION

To develop an application for student in university, identification of tool with islamic components should be considered as early to sustain the iNAQ despite the application developed involve in mobile application. A specific tool to analyse by managing and budgeting using mobile application that student has used. However, current study is identified by researcher as illustrated as Table 1 has been focusing on the monitoring budget planner using mobile application that allow user to track the cashflow and expense of money. Thus, it is necessary to have a tool to monitoring and managing the student budget planner with provided Islamic financial literacy such as Islamic components feature using mobile application tool. These studies conducted a review on the seven studies on comparison of the mobile application tools for monitoring and managing as well as to tracking budget purpose. A most of studies found that work on the used mobile application. Based on our review, as shown on Table 1, this is found that there are various tools used by managing budgeting that supporting the mobile application with it purpose of the respective tools. Based on the analysis, most of mobile application developed are not limited to assist managing and tracking budget but almost none existence for managing students cashflow as well as iNAQ integration that emphasized of the financial management in islamic perspectives where the thorough analysis and study is still lacking.

CONCLUSION AND FUTURE WORK

Managing budget with iNAQ is crucial and important in order to produce a holistic university student. Therefore, development mobile application that inclusive of the iNAQ item is necessary. This is to ensure that the monitoring budget from student is consistent and sustain monetary student is guaranteed along in university education. Therefore, this paper provides a gap of study for existing work on development of mobile application for monitoring and managing the budget of student in university that exist in market for commercial and research purposes. We report the findings and analysis different of studies on development of mobile application for university student in managing and tracking their budget planner. The strength and weakness provide the understanding the limitations of the existing tool. This study can conclude that the current existing still lacking and need further enhancements.

In future works, this study will be plan to further thorough research in a form of Systematic Literature Review (SLR), developed an approach and automated tool that would be used by student in university for monitoring, managing and tracking the budget planner inclusive of INAQ features using mobile application. This tool will assist the student to validate the budget planner performance.

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CHILD MARRIAGE IN MALAYSIA: ITS FACTORS, CONSEQUENCES AND ISLAMIC PERSPECTIVE

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Abstract

Every year, the practice of child marriage sacrifices millions of children's lives and futures. Although there are laws regarding the minimum age for marriage, this practice remains widespread and has become a problem in many countries. In 2014, a United Nations special expert discouraged child marriage as this practice leads to premarital sex and child abandonment. Moreover, the persistence of this practice also strips girls of their right to proper education and better job opportunities. Although the practice of child marriage was not accepted in some societies, this practice still takes place in many parts of the world. Among the factors that led to child marriage are family poverty, education, religious and cultural norms, and unwanted pregnancy. Therefore, based on online research studies, this paper argues that the practice of child marriage should not be normalised as it affects children's education, health, and safety. This paper will explain in detail the factors and consequences of child marriage. Furthermore, this paper will argue the views of child marriage according to the Islamic perspective. To sum up, this paper will conclude all the topics and give several recommendations in the hope that this research will help other researchers in their findings.

Keywords: *child, child marriage, Islamic perspective, consequences, factor, Islamic scholars.*

INTRODUCTION

Marriage is a significant and pleasant event in everyone's life, but it must be carried out by the willingness of both parties who enter into this social contract (Ullah *et al.* 2021). Living with an intimate partner could improve someone's well-being potentially through providing emotional support, social networks, sexual intimacy, companionship, and social meaning (Perelli-Harris & Styrac, 2018). According to social integration and emotional support theories, marriage should minimize individuals' feelings of isolation and protect them against stress, anxiety, and depression (Clark *et al.*, 2020).

People who enter into marriage believe that marriage is more than fulfilling the desire of lust in the body and soul, but also to attain calm, tranquillity, and mutual nurturing between husband and wife on the foundation of love and affection (Muhammad Hori, 2019). In Islam, marriage can be moral protection and a social commitment. Just like other religious responsibilities, it must be done by those

competent in undertaking the duties entailed (Ahmad, 2018). Marriage is advantageous for both men and women in Islam, and it is regarded as a means of achieving spiritual perfection since it completes humans (Amiruddin *et al.*, 2021; Antunes *et al.*, 2018).

The Department of Statistics Malaysia stated that the average age of grooms remained at 28 years, and the median age of brides increased from 26 to 27 years. Although there is a minimum age for marriage, child marriage in Malaysia is still increasing throughout the year (Samuri *et al.*, 2022). Child marriage occurs practically, and prevalence is practice most in every region (Gastón *et al.*, 2019) of the world, such as South Asia, the Middle East, Africa, and the Caribbean (Wodon, 2015). Currently, according to the Department of Sharia Judiciary Malaysia (JKSM), there were 6,584 Muslim child marriages from 2011 to October 2016 (Samuri *et al.*, 2022).

Moreover, it is difficult to abolish the practice of child marriage because the voices of people impacted by it are difficult to hear due to their vulnerability in society (Kohno *et al.*, 2020). Most of those involved in child marriage said that the choice to marry at a young age is taken swiftly and without much thought. Some of them said they settled for marriage at a young age due to a lack of attractive choices for their future (Wodon, 2015). Girls are more likely to become victims of forced marriage, with some getting married as young as eight (Chantler & Carry, 2020).

The United Nations International Children's Emergency Fund (UNICEF) stated that there are around 720 million women in the globe who were married while they were children, and roughly 15 million girls get married before the age of 18 (Svanemyr *et al.*, 2015). Although the practice of child marriage is prevalent in society, especially in rural and backward communities, there is silent complicity to this practice (Ghosh & Kar, 2010). Among the implications of child marriage can be seen in health and economy (Svanemyr *et al.*, 2015). Meanwhile, among the reasons that lead to child marriage are religious and cultural norms and poverty (Kohno *et al.*, 2019).

Therefore, this paper will discuss the factors, consequences, and Islamic perspective of child marriage. First, this paper will explain the definition of child marriage. Second, this paper discusses the factors and effects of the practice of child marriage. Third, the researcher will discuss marriage according to the Islamic perspective. Lastly, the researcher will conclude the discussion by linking all the topics and giving several recommendations.

DISCUSSION

Child Marriage: Definition

The age of majority is the chronological age at which a kid is no longer considered a minor under the law. When a person achieves the age of majority, they receive power

over themselves, their acts, and their choices, and the legal supervision and duties of their parents or guardians are immediately terminated. In contrast, the definitions of marriage and child marriage may vary by jurisdiction, as can the interpretation of the age of the majority. This paper discusses many perspectives and definitions of child, marriage, and child marriage in the next paragraph.

Definition of Child

A child is defined as a person under the age of 18 as stated in *Article 1 of the Convention on the Rights of the Child (CRC)*, “for the purposes of the present Convention, a child means every human being below the age of eighteen years unless, under the law applicable to the child, the majority is attained earlier” (General Assembly Resolution, 1989). This article stated that a child is a person under the age of 18 unless they are changed in the national laws (Malayandy & Ismail, 2021). Meanwhile, the definition of a child in Malaysian common law is governed under the relevant legislation in accordance with their respective purposes.

A child is defined as a person under the age of 18 in *Section 3(2) of the Age of Majority Act 1971 [Act 21]* and *Section 2(1) of the Child Act 2001 [Act 611]*. However, the interpretation of child is different in other laws such as the *Adoption Act 1952 [Act 257]*, the *Guardianship of Infants Act 1961 [Act 351]*, and the *Domestic Violence Act 1994 [Act 521]* (Malayandy & Ismail, 2021). In the *Law Reform (Marriage and Divorce) Act 1976 [Act 164]*, a child is defined as a person under the age of 18 who is a child of the family, regardless of whether he or she is adopted, illegitimate, or the child of one of the parties to the marriage.

Malaysia’s legal system is recognized as a dual legal system, as Islamic law is used concerted with civil law (Subramaniam, 2018). However, in Malaysia Islamic law is only applicable to Muslims (Amir, 2022), so it is important to examine the definition of a child under Islamic law too. Age is regarded as a secondary source for determining puberty in Islamic law (Arnab & Siraj, 2020). Generally, a child in the Islamic perspective is a person who has not attained the age of maturity or a person who did not reach puberty through natural signs such as menstruation or emission of sperm (Fowzul, 2022).

Definition of Marriage

According to Oxford learners’ dictionaries, marriage is the legal relationship between two people who are married to each other. In Islam, marriage defines as a contract that allowed sexual intercourse through the pronouncement of marriage which is offer (*ijab*) and acceptance (*qabul*). Marriage contract between men and a woman that not a family members (*mahram*) legalise their relationship and restrict their rights and obligations (Millyuner *et al.*, 2021). Moreover, marriage also can be defining an agreement between two individuals who are fundamentally different from one

another and who come from two different families to live together until the end of their lives (Imam & Akhouri, 2022).

Definition of Child Marriage

UNICEF defines formal marriage or other intimate connection between two females under the age of 18 is referred to as child marriage (Efevbera & Bhabha, 2020; Irani & Roudsari, 2019). Moreover, the committee on the Rights of the Child (CRC) defines “child marriage” as any marriage where either one or both partners are below 18 years of age (Gastón *et al.*, 2019). Besides, according to *Section 10 of Law Reform (marriage and divorce) Act 1976* [Act 164], child marriage is a marriage under the age of 18 years and any solemnization under the age of 18 years shall be void (Samuri *et al.*, 2022).

FACTORS OF CHILD MARRIAGE

The prevalence of the practice of child Marriage in Malaysia is unhealthy. Health and education appear to be part of concern among the society. Over two years ago 543 child marriages including applications were recorded in Malaysia with Sarawak the highest number reported (Lim, 2020). Among the factors of child marriage in Malaysia including family poverty, religious and cultural norms, education and unwanted pregnancy.

Family Poverty

Women's decision to get married at a young age is sometimes because of their family's poverty. Low household income is also substantially correlated with school dropout among children (Rahiem, 2021). In 2010, 76.9% of peninsular Malaysia's indigenous groups lived in poverty, with 35.2% classified as living in extreme poverty. This crisis contributed to the practice of child marriage among them to keep living (Nasrullah *et al.*, 2014). Poverty most likely contributes to female child marriage, as a girl from a poor household tends to marry earlier (Ehsan *et al.*, 2021). Poor financial assert the girl to be independent because they can no longer depend on their parents (Bahari *et al.* 2021).

This situation finally left their family no safer option than marrying them off(Lai *et al.* 2018). When girls marry, they leave their family home, reducing the number of family members and the financial strain on the parents (Raj *et al.*, 2010). Moreover, parents marry off their daughters to get cash because they receive a dowry from the girl's potential spouse (Sarfo *et al.*, 2022). Although the girl is not interested in her husband, they are forced to get married earlier to live a better life (Neema *et al.*, 2021). However, in certain societies, parents traded their girls in exchange for a commodity to settle their unsettled debt and disputes (Menon *et al.*, 2018).

Religious and Cultural Norms

According to a survey in the article of (Kohno *et al.* 2020), most participants said that the turning point in their decision to marry minors was when their parents accused

them of having premarital sex. Some were pregnant before marriage, both of which are forbidden in their faith, Islam. Premarital sex is known as a sinful act by both the younger generation and their parents' generation (Hazariah *et al.*, 2020). This belief arose from the Malay-Muslim religious tenet of avoiding what is forbid in Islam. However, although the taboo against premarital sex is known widely among them, sometimes it is violated in practice (Ishak *et al.*, 2016).

Therefore, to cover the family's humiliation, the parents compelled the daughters to marry promptly (Lai *et al.*, 2018), even though the girls deem to have committed crimes (Kohno *et al.* 2020). As a result, some parents argue that early marriage is a strategy to avoid premarital sex to ensure their daughter's purity (Raj *et al.*, 2010). Thus, the phenomenon of child marriage is impacted by the ways of defending the girls' and families' dignity (Bahari *et al.* 2021).

Education

Education is a fundamental human right that everyone deserves (Esteban Ibáñez *et al.*, 2020). However, in some societies, the right to education of girls-child is more likely to be denied due to child marriage (Nhampoca & Maritz, 2022). Education has a significant relationship with the prevalence of child marriage, as education helps in delaying early marriage (Sanjaya *et al.*, 2018). Inadequate access to schooling may also contribute to children marrying in indigenous communities. They may not have easy access to nearby schools and the financial wherewithal to acquire education supplies such as uniforms and books (Lai *et al.*, 2018).

Somehow, some parents consider the puberty of their daughters as a sign for them to get married instead of continuing schooling (Yassin, 2020). Additionally, some parents consider that educating sons and spending on their schooling are more rewarding while letting their daughters to involved in child marriage instead (Prakash *et al.*, 2019). This practice also related to the parent's education, as illiterate parents were more likely to involve their daughter in child marriage than educated parents who had secondary and higher education (Roy & Chouhan, 2022).

Unwanted Pregnancy

In some societies that practice the patriarchal gender, a girl's virginity is highly valued (Rahiem, 2021). In order to control unintended pregnancy and protect their daughter's virginity, likewise their family's reputation, most Asian parents marry off their daughters (Wibowo *et al.*, 2021). According to them, a girl's virginity and chastity influenced the family's pride (Onyido & Brambaifa, 2018). Muslim society also encourages their daughter to get married early, as sexual activity before marriage is forbidden. Furthermore, parents prefer to wed their daughters young to avoid premarital relations, as premarital virginity is of utmost importance to Muslims (Rahiem, 2021).

CONSEQUENCES OF CHILD MARRIAGE

Child marriage has long-term consequences for girls that last well beyond adolescence. Child marriage endangers girls' health and lives. Therefore, the writer will discuss the consequences of child marriages regarding educational, economic, mental, and physical health and violence.

Education

Education is essential because it guides and leads people to succeed in all aspects of life (Singh *et al.*, 2019). However, those that marry young tend to drop out of school early and permanently (Uddin, 2021). When they stop their education, it will cause their illiteracy level to go up, and they may not be aware of what they are doing (Shahi *et al.*, 2019). Their access to education was limited due to several reasons, such as domestic burdens, pregnancy, and society's opinion that view marriage and schooling at the same time are incompatible (Tønnessen, 2018).

Without education, one cannot make rational decisions in family matters (Barone & Assirelli, 2020) Without education, parents cannot balance their children well in traditions, culture, education, religion, and modernity (Taufik, 2020). Moreover, without education, girls cannot improve job opportunities and higher lifetime earnings, which allows them to break the cycles of illiteracy and poverty (Mughal & Awan, 2021). This is because only higher education institutions prepare all graduates with the skills to meet employers' needs. Thus, early marriage hinders their access to education and makes it harder for them to secure steady, well-paying employment to support their spouse (Rukhadze, 2018).

Economy

Economic matters often time the consequence of child marriages (Parsons *et al.*, 2015). The lack of good income frequently triggered marital quarrels (Zhang, 2022). The labour market is linked to education, meaning that great occupational and salary chances come from higher education as they might qualify (Lauder & Mayhew, 2020). However, child marriage affects the chances of female labour due to their lower educational attainment (Wodon *et al.*, 2015). Young girls involved in child marriage have to drop out of school due to their reproductive lives and responsibilities as a wife and mother rather than play and study like other children (Selby & Singer, 2019).

Subsequently, this led to lower labour participation which significantly not only affected women and their families but may also reduce economic growth in communities or societies (Parsons *et al.*, 2015). This situation happened through fertility and population growth (Wodon, 2017). Child marriage causes girls to have children earlier (Bergsten, 2020) and have more children throughout their lives. This situation reduces households' ability to meet their basic needs, such as food,

education, and health care (Das, 2018). This whole effect finally resulting their children being raised in a low-income background, thus passing on the cycle of poverty to the next generation (Bartels *et al.*, 2021).

Mental Health

Girls who marry before the age of 18 are thrown into adulthood without a healthy transition to adolescence and adequate life skills. (Parsons *et al.*, 2015). This situation leads to severe consequences for girls (Aslan, 2018) as they may also have significant mental health issues and be in severe mental distress (John *et al.*, 2019). Exposure to psychological disorders in child marriages can happen due to the denial of their rights to freely express their views (Burgess *et al.*, 2022; Nasrullah *et al.*, 2014). The disruption to their childhood isolates them from their family and peers (UNICEF, 2022). Depression is the most common diagnoses reported among this group as they face more stressful life events and are at higher risk for substance abuse-related disorders (Almbaidheen & Turan, 2022). Finally, this led to suicidal thoughts and attempts (Efevbera *et al.*, 2019). They identified that this happened among the girls forced into early marriages used as a form of punishment for their families due to the stigma attached to suicide-related deaths (Ponnupillai Anitha, 2022c).

Physical Health

Many parents believe that a young marriage benefits the spouse without knowing that this practice also negatively impacting them psychologically and physically (Ridzuan *et al.*, 2018). They are exposed to potential complications during and after pregnancy and labour as they have small pelvises (Fan & Koski, 2022) and are not ready for childbearing. They also significantly impacted women's psychological well-being, even after accounting for other factors that might affect mental health, such as household wealth and experiences of intimate partner violence (Nour *et al.*, 2017).

Violence

Girls forced to marry as children are at risk of being controlled by their husbands and in-laws because they lack confidence and do not know how to keep a healthy marriage. (Ponnupillai Anitha, 2022b). They become victims of intimate relationship abuse by their spouses and in-laws. (Vogelstein, 2020). A girl forced into child marriage exposes to nearly twice the risk of domestic violence compared to girls married after turning 18 (Latifiani, 2019). The lack of empowerment and awareness impedes girls' ability to advocate for themselves. Hence, they remain trapped in their husband's homes and, unfortunately, pass this vicious cycle of violence and inequality to their girl children (Ponnupillai Anitha, 2022b).

ISLAMIC PERSPECTIVE

In Islam, marriage is a sacred institution. It is a union between a couple through a marriage contract with several requirements and conditions. However, there is an

assumption that Islamic law does not set a specific age of marriage because neither a narrative record of the sayings or customs of Muhammad and his companions (*Hadith*) nor the sacred scripture of Islam (*Quran*) states a specific age or marriage. This led to several controversies regarding the minimum age of marriage, such as a news report that eleven-year-old girls marry forty-year-old men (Muhamad, 2018). Thus, below will discuss the minimum age of marriage according to different scholars and the most suitable age of marriage under Islamic law in Malaysia.

Age of Marriage According to *Quran* and *Hadith*

In Islam, there is no specific age for marriage. A narrative record of the sayings or customs of Muhammad and his companions (*hadith*) and the sacred scripture of Islam (*Quran*) only stated the signs of someone whether they were able to marry or not (Zulaiha & Mutaqin, 2021). *Quran* and *Hadith* indirectly point out that maturity is a sign to someone before they are capable of marriage (Azizah, 2018). Islamic scholars do not have an agreement (*ijma*) on the marriage age. They only agree that one of the marriage conditions is that someone has to attain maturity (*baligh*) (Suwardiyati *et al.*, 2022).

According to the perspective of Fiqh, in marriage, age or maturity is a very important factor in order to determine whether he is mature enough to act or not (Zulaiha & Mutaqin, 2021). Every action and responsibility is measured by someone's maturity, making maturity one of the most important factors in marriage. (Azrorizain *et al.*, 2022). However, there is hadith connected to Aisha (RA) and Prophet Muhammad (PBUH) where they got married when Aisha (RA) was only six years and consummated when she was nine years, and it depends on Muslims to decide on a reasonable marriage age following the predetermined signs and to take local conditions into account when passing the law (Zulaiha & Mutaqin, 2021). According to The Quran, the prerequisite for marriage is when a person cognitively reaches, at the very least, the age of puberty, as stated in (*Surah al-Nisa: 6*):

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"[a]nd examine the capabilities of orphans until they attain a marriage age, then if you see in them sound judgement, devote their properties to them".

Moreover, based on hadith that connected to Aisha and Prophet Muhammad (PBUH), they got married when Aisha was only six years and consummated when she was nine years old. *hadith* that connected to Aisha and Prophet Muhammad (PBUH), they got married when Aisha was only six years and consummated when she was nine years old:

Narrated Aisha: that the Prophet Muhammad (PBUH) married her when she was six years old and he consummated his marriage when she was nine years old. Hisham said: I have been informed that Aisha remained with the Prophet Muhammad (PBUH) for nine years. (Sahih al-Bukhari 5134). Narrated Aisha: that the Prophet Muhammad

(PBUH) married her when she was six years old and he consummated his marriage when she was nine years old. Hisham said: I have been informed that Aisha remained with the Prophet Muhammad (PBUH) for nine years (i.e. till his death) (Sahih al-Bukhari 5134

Based on the above hadith, the four scholars, Hanafi, Maliki, Shafi'i, Hambali agree the practice of marriage between minors is allowed. As a consequences, this *hadith* become an example of a person who follow the tradition of marriage before puberty (*bulugh al-nikah*) (Supraptiningsih, 2021). There are two methods for determining the puberty of a child namely which are through age and natural evidence (Mohd & Kadir, 2019). The four scholars, which are Shafi'i, Hanafi, Maliki and Hambali agreed on the natural sign of maturity such as menstruations for women and dreaming of sex (*ihtilam*) for men (Fowzul, 2022).

However, they have a different opinion on maturity if someone does not show any natural signs (Ullah *et al.*, 2021). Shafi'i and Hanbali schools argue that men and women reach puberty at the age of 15 (Al-Robin & Sodiqin, 2021). Maliki schools argue that the age of puberty for females and males is 18 years. The Hanafi school argues the age of puberty and women are different as men at 18 years and women at 17 years (A. Ahmad *et al.*, 2020). However, the *Mufti Wilayah Persekutuan* has inclined towards the opinion of *Hanafi* and *Maliki* schools which the age of puberty is at 18 years. This is because in Malaysia, those under the age of eighteen years still not afford to support themselves (Yusof, 2018).

Malaysian Islamic Law

In Malaysia, enactments that govern Muslim affairs are provided under each state Council of Islamic Religious Affairs (Shuaib, 2018). As stated under *Article 121(1A) of the Federal Constitution*, the jurisdiction of Syariah courts only applies to Muslims accordingly within the boundaries of the respective states or territories (Sivaperegasam & Rajanthiran, 2017). This somehow becomes the reason why the administration of the Shariah courts is different for each state (Muhammad, 2011). The affairs under the shariah jurisdiction include marriage, inheritance, will, payment made annually under Islamic law on certain kinds of property and used for charitable and religious purposes, one of the five pillars of Islam or *zakat*, sharia economics, and more (Azzahra & Shuaib, 2022).

According to *Section 8 of the Islamic Family Law Act 1984 [Act 303]*, the minimum age for marriage is 18 years for a male and 16 years for a female (Makhtar & Ab Kadir, 2019). However, any person under the minimum age of marriage must obtain consent from the Shariah court and their parent's consent before being permitted to marry (Mallow & Shafie, 2019). Marriage between the ages of 16 and 18 is only authorised if the marriage advantage both parties, the parties agree, and the minors can understand the nature, responsibilities, and rights of marriage (Samuri, Mohd Awal, *et al.*, 2022).

In order to determine this, the judge must summon minors and contact the pediatrician to confirm existing evidence forwarded to the court. Although the court allowed girls under the age of eighteen, a child is still defined as a person under eighteen in *Section 2(1) of the Children Act 2001* [Act 611]. For that reason, The Committee on the Rights of the Child argues the inconsistency regarding the minimum age of marriage between Islamic law and civilization. Therefore, they suggested that the Malaysian government align the definition of a child with the terminology used in the national legislation (Ernawati *et al.*, 2020).

Moreover, the Malaysian Government has considered child marriage a severe issue since 2010. Consequently, the Fatwa committee of the National Council for Islamic Religious Affairs of Malaysia issued a fatwa regarding child marriage as they consider this practice should not be normalized. Furthermore, they said that the hadith of marriage between Aisha and Prophet Muhammad should not be used to normalize and allow the practice of child marriage. Unfortunately, the respective states refused to adopt the fatwa, resulting in the Sharia courts permitting child marriage with few rejections (Samuri, Malek, *et al.*, 2022).

CONCLUSION

Based on the description and discussion, it can be concluded that child marriage is only partially prohibited in Malaysia due to the dual legal system. Consequently, the minimum marriage age cannot be fully enforced because it is contrary to Islamic law. Moreover, there are some factors that intensely to avoid, such as poverty and religious prohibition, and cultural norms. In order to ensure safety and peace in Malaysia, we had no choice but to respect others' religious and cultural norms. Therefore, it is advised to the government to take several preventions to ensure the number of child marriages slowly decreases throughout the year. For instance, the government should pay more attention to providing education to those in need. This is because education help to spread awareness to society regarding the harms of practicing child marriage.

Moreover, the government should provide more economic opportunities to women and families. Some parents may be aware of the consequences of child marriage, but they have no choice but to marry their daughter due to poverty. Therefore, by providing some job opportunities, they may not choose to marry off their daughter and give better education to their children. In that case, child marriage can be avoided for the whole world to live better and more harmonious lives.

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Religious Text

Surah Al-Nisa verse 6

Sahih al-Bukhari 5134, Book 67, Hadith 70

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Adoption Act 1952 [Act 257] (*As 1 January 2013*)

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CONSANGUINEOUS MARRIAGES: BETWEEN SCIENCE AND RELIGIOUS PERSPECTIVES

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Abstract

Consanguineous marriages are commonly practised even from the early existence of humanity. Until now, consanguinity has been widely practised in many countries, including Malaysia, with variable prevalence and reasons depending on religion, culture, education, and geography. A high proportion of marriages in South and Middle East Asia are contracted between close biological relatives due to cultural preference, which is a deeply rooted social fashion among these societies. Even though consanguineous marriage has become a cultural preference in the community, the normalisation of that culture can affect and interfere with the well-being of the new generation due to health problems because of parental consanguineous marriage. Based on library research, this paper argues that consanguineous marriages should not be normalised and become a tradition or trend as they may lead to genetic diseases. It can be seen that adverse effects may be associated with the expression of genes received from a common ancestor, which may result in the mortality and morbidity of the offspring. Although Islam allows such marriages, permitting them does not mean Islam encourages them, together with the views of other religions. Besides, many countries' opinions of consanguineous marriage are also elucidated in this paper. This paper will end with several recommendations for raising awareness pertaining to the issues raised.

Keywords: *Consanguinity, Consanguineous Marriages, Prevalence, Science, Religious.*

INTRODUCTION

According to the Department of Statistics Malaysia Official (2022), the number of marriages decreased by 9.4 per cent from 203,661 in 2019 to 184,589 in 2020. Whereas the number of Muslim marriages recorded in 2020 was 145,202, a decrease of 1.8 per cent as compared to 147,847 in 2019. Similarly, non-Muslim marriages declined by 29.4 per cent from 55,814 in 2019 to 39,387 in 2020. Moreover, the median age of grooms remained at 28. Meanwhile, the median age of brides decreased from 27 to 26 years. However, the average age of grooms and brides for Muslim and non-Muslim couples remained unchanged. Furthermore, according to Singh & Bargayary (2017), marriage can happen in various ways, including through arranged marriage, which is divided into two types: arranged exogamous marriage and arranged endogamous marriage.

Following Hyndman-Rizk (2016) and Rasmussen (2012), exogamous marriage is marriage outside the group, facilitating alliances and mixing between groups. Meanwhile, endogamous marriage, by contrast, reinforces marriage within the group

and in stratified societies, which helps maintain social, economic, and political distinctions and preserves differential access to culturally valued resources. Furthermore, exogamy can be divided into several parts, such as Gotra Exogamy, Village Exogamy, Pinda Exogamy, and Totem Exogamy. Meanwhile, endogamy also consists of several parts, such as Tribal Endogamy, Caste Endogamy, Class Endogamy, Race Endogamy and Sub Caste Endogamy (Khatri, 2021). Many arranged marriages with caste and religious endogamy were widespread in the past. These unions are based on alliances between members of the same caste, religion, community, and village (Sharma, 2019).

Consanguinity is a social behaviour characterised by the arrangement of marriages between relatives (Laghmich *et al.*, 2019), and consanguineous marriages are included under arranged endogamous marriages (Chisholm & Bittles, 2015). Furthermore, consanguineous marriages are a kind of relationship widespread worldwide, especially among Asian and African populations (El Sheikh, 1988; Saadat & Zarghami, 2018). However, the lowest rates of consanguineous marriage are found in Western Europe, North America, Australia, and Russia (less than 1%), with intermediate rates seen in the Iberian Peninsula, Japan, and South America (between 1–20%). Then, North and Sub-Saharan Africa, as well as West, Central, and South Asia, have the highest proportion of consanguineous marriages (20–50%) (Carlson, 2013; Islam *et al.*, 2018).

In many cultures around the world, it is frowned upon to marry relatives, which in some countries is illegal (Yamani, 2021). However, that has not stopped people from doing it. According to O'Neill (2018), historical figures, such as Queen Victoria and Prince Albert, have often engaged in this practice, as presidents like Martin Van Buren and John Adams. Nevertheless, a few modern and legendary examples exist where couples have opted to wed within their familial bloodlines. For instance, Charles Darwin, the naturalist who introduced the theory of evolution to the world, married his first cousin, Emma Wedgwood. Then, the couple had ten children together (White, 2016). Furthermore, in 1919, famed physicist Albert Einstein married his second wife, Elsa Lowenthal, in one of the oddest cousin pairings ever. They were first cousins on his mother's side and second cousins on their father's side (Frappier, 2019).

Therefore, this paper discusses the issue of consanguineous marriages based on scientific and religious perspectives. As the beginning, the first section of this paper explains the definition and the types of consanguineous marriages, which are divided into several degrees or generations. Moreover, the second section elucidates the prevalence of consanguineous marriage in several countries, including Malaysia. Furthermore, the third section examines consanguineous marriage from a scientific perspective, which discusses the health effects of the marriage. Finally, the fourth section elucidates the views from the Islamic perspective, which are accompanied by

evidence from the *Quran* and *Hadith*, together with views from several other religions. To conclude, this paper summarises the issues discussed and includes recommendations that can be considered for solving related issues.

DEFINITION AND TYPES OF CONSANGUINEOUS MARRIAGES

The term consanguinity derives from the French word “consanguinité” and the Latin word “consanguinitatem”. Those words mean “of the same blood” or being related to someone through a common ancestry (Oniya *et al.*, 2019). Moreover, it refers to unions between two people who are biologically related and share common ancestors, or in other words, a shared blood relationship (Romdhane *et al.*, 2019; Shawky *et al.*, 2013). According to Johnston *et al.* (2019), marriage between two such individuals who have at least one traceable common ancestor has been said to be “consanguineous,” and the offspring of such mating is said to be “inbred”. In the meantime, consanguineous marriage, also known as “cousin marriage”, is a marriage between two blood-related individuals who are second cousins or closer (Anwar *et al.*, 2020).

Furthermore, consanguineous marriage can be characterised by the degree or generation of relatedness between the spouses (Aamir Aziz, 2021). First cousins, double first cousins, half-first cousins, first cousins once removed, second cousins, second cousins once removed, and third cousins are among the generations that occur in consanguineous marriages (Nalini Bage & Rao, 2016). First-degree relatives consisted of the individual’s parents, full siblings, and children, whereas second-degree relatives included the individual’s grandparents, grandchildren, aunts, uncles, nephews, nieces, and half-siblings (Lim *et al.*, 2017). However, according to Siraj (2021), individuals classified as first cousins are the daughters of a paternal uncle, the daughter of a maternal aunt, and the daughter of a maternal uncle. Moreover, the second cousin is the grandchild of a paternal uncle, a maternal aunt, and a paternal aunt. Next, the third cousins include the great-grandchild of the maternal aunt and half-aunt.

Moreover, first-cousin marriages are divided into two types, namely paternal first cousins (PFC) and maternal first cousins (MFC) (Rai *et al.*, 2017). PFCs consist of parallel paternal first cousins (PPFC) and cross paternal first cousins (CPFC). Similarly, MFC also consists of parallel maternal first cousins (PMFC) and cross-maternal first cousins (CMFC). Moreover, PFC and MFC are also known as patrilateral and matrilateral (Sharkia *et al.*, 2015). Additionally, a patrilateral parallel is the union of a male with his father’s brother’s daughter. Meanwhile, a patrilateral cross is a union of a male with his father’s sister’s daughter. Next, a matrilateral parallel is the union of a male with his mother’s sister’s daughter. Meanwhile, a matrilateral cross is the union of a male with his mother’s brother’s daughter (A.Rosenbergc, 2022).

In addition, marriage between uncle and niece is prohibited, especially in the Muslim religion (S. Y. Khan, 2018). Besides, according to Otto *et al.* (2020), first-cousin marriages can be classified into four types according to the gender of the two sibling parents of a couple of cousins. First, in type A, the couple of first cousins are the offspring of two sisters. Next, in type B, the mother of the male cousin is the sister of the father of the female cousin. Then, type C is the inverse of type B. In type D, a couple of first cousins are the offspring of two brothers. In short, the most common type of consanguineous marriage is the first cousin one, which generally accounts for proportions as high as 30% to 50% or even more of all mating between relatives in each population (Hamamy, 2012; Romdhane *et al.*, 2019).

THE PREVALENCE OF CONSANGUINEOUS MARRIAGES

The global prevalence of consanguinity and the patterns of different types of consanguineous marriages vary within populations according to ethnicity, culture, caste, geography, and religion (Eden Preis, 2022; F. Z. A. Khan & Mazhar, 2018). Religion and the economic situation were the main reasons for pushing the family toward consanguinity (Kohno *et al.*, 2020). However, the determinants of consanguinity may vary and fluctuate in line with societal developments but typically centre on socioeconomic levels, education, and rural versus urban setups (Rubeena Zakar, 2022; Yahyaa *et al.*, 2019). For instance, consanguineous marriages are typically reported in rural areas and among communities of low socioeconomic status. Women in these unions tend to have lower levels of education, lower labour force participation rates, and extended and traditional family types (Kaplan *et al.*, 2016).

Furthermore, numerous empirical research studies have been conducted on different classes of people who marry relatives. According to Ijaz *et al.*, 2017, Pakistan and India have among the highest percentages of consanguinity, with Pakistan having a rate of over 73% and India having a range of 5% to 60% (K. & Wadhwa, 2016). Besides, Saudi Arabia has a high rate of consanguineous marriage that varies between regions. Riyadh, the capital city of Saudi Arabia, with a population of approximately 7.5 million and a birth prevalence of 38,000 per year, also has a consanguinity marriage prevalence of 60% (Sabbagh *et al.*, 2015).

Therefore, in this section, the reasons for the prevalence of consanguineous marriages in several countries will be briefly discussed, especially in Pakistan, India, Saudi Arabia, and Malaysia.

Prevalence of Consanguineous Marriage in Pakistan

Consanguinity is a deeply rooted social and cultural trend in Pakistan. The primary cause of the advantage of consanguineous unions (CU) is socio-cultural instead of economic benefits (Nawaz *et al.*, 2021; Zaman, 2010). However, according to Li *et al.* (2017), Pakistan has the highest prevalence of consanguineous marriages globally,

presumably because this practice provides several social and economic advantages. Besides, in the rural setup, consanguinity is practised even more, as it is thought to preserve social structure regarding ethnic and tribal affiliation (Chauhan *et al.*, 2020). The world population has been divided into four broad categories based on the prevalence of consanguineous unions (CU), i.e., less than 1%, 1–10%, 10–50%, and unknown. Then, Pakistan falls into the third group, where consanguinity is generally highly prevalent in the country (Bittles & H., 2010; Cheema *et al.*, 2016).

Prevalence of Consanguineous Marriage in India

Consanguineous marriages are widely practised by the Muslims of India, like other Muslim populations of West and South Asian countries (A. H. Bittles & Hussain, 2000; Kalam *et al.*, 2020). In addition, consanguineous marriage is more prevalent among the Muslims of North India and the Hindus of Southern India. Moreover, the other backward classes and the less educated population of the middle and more affluent classes are also included (Acharya & Sahoo, 2021). Besides, consanguineous marriages were higher among women with no education (30%), double that of women with higher education (17%). Next, the women from the poorer wealth quintile had the highest percentage (31.4%) of consanguineous marriages in the southern states compared to all other economic categories. However, parallel to the poverty factor, these marriages were found to be higher in rural areas (27.7%) than in urban areas (23.3%) in southern India (Kumari *et al.*, 2019).

Prevalence of Consanguineous Marriage in Saudi Arabia

As most marriages are still tribal, Saudi Arabia is one of the top four Eastern countries with the highest prevalence (42.1–66.7%) of consanguineous marriages (AbdulAzeez *et al.*, 2019). However, with the increasing education rate in Saudi Arabia, the prevalence of consanguineous marriage does not seem to decrease as quickly as expected. Based on the cross-sectional study conducted in 2017–2018, it was found that the prevalence of consanguineous marriage among the participating educated adults was 39.8%, and most of these were married to first cousins (Mahboub *et al.*, 2020). The increased educational level may be attributed to the fact that attitudes toward this type of marriage are more influential than educational level (Mahboub *et al.*, 2018). The social and traditional cultures were the principal reasons for favouring consanguinity in Saudi Arabia. They believed that consanguinity would help to strengthen family relationships and enforce family bonds (Alharbi *et al.*, 2015).

Prevalence of Consanguineous Marriage in Malaysia

Malaysia is ethnically diversified, where more than 30% of Malaysian citizens are non-native, such as Chinese or Indian (Chua *et al.*, 2021). There is percentage proves that Malaysia is a multi-ethnic nation comprising Malays and other indigenous groups (67.4%), Chinese (24.6%), Indians (7.3%), and others (0.7%) (Alwi & Syed-Hassan, 2022). Moreover, consanguineous marriage is not widely practised in Malaysia compared with other South Asian and Middle East countries. However, it is practised

and prevalent in certain ethnic groups or indigenous populations and certain states in Malaysia (Abd Hamid *et al.*, 2020). For instance, the rule of exogamy usually extends to at least third cousins in some communities, such as the Kadazan Dusun of Tambunan and most Murutic societies, which go beyond fifth cousins. First-cousin marriage is nearly always prohibited, except among the Bonggi due to their historical isolation, and among the Sama Dilaut and other east coast Bajau, where children of sisters can marry due to the solid matrilineal pull in those societies (Pugh-Kitingan, 2021).

THE SCIENCE PERSPECTIVE

The closeness of the relationship between the parents determines the extent of common genetic inheritance. Brothers and sisters share 50% of their genetic makeup, uncles and nieces share 25%, and first cousins 12.5% of their inherited genetic material (Joseph *et al.*, 2015). Consanguineous marriages are linked to many rare recessive genetic disorders in which members of the same family carry specific recessive genes that are usually suppressed in their genetic makeup. Thus, when interfamily marriages occur, the chances of these genes being expressed in the offspring are significantly increased due to a homozygous condition (Ullah *et al.*, 2017). The terms homozygous and heterozygous describe gene (allele) pairs. Individuals with two copies of the same allele (RR or rr) are known as homozygous. Individuals with various alleles (Rr) are heterozygous (Vallier *et al.*, 2017).

For that reason, consanguineous marriages increase homozygosity in offspring, increasing the risk of inherited disorders, which cause genetic disorders at family and population levels (Bhinder *et al.*, 2019). In addition, homozygosity is the state of possessing two identical forms of a particular gene, one inherited from each parent. Meanwhile, the opposite is heterozygous, the possession of two different forms of a particular gene, one inherited from each parent (De Vivo *et al.*, 2015). Prior studies have shown a relationship between consanguinity and some genetic disorders.

For example, immunodeficiency disorders, beta-thalassemia, children's hypertension, protein C and protein S deficiency, phenylketonuria, and low birth weight (Shanti *et al.*, 2015). Moreover, higher rates of spontaneous abortions, childhood deaths, Mediterranean fever, and cerebral palsy have also been reported due to consanguineous marriages (Özpulat *et al.*, 2017). According to Mazharul Islam (2017), the risk of having babies with congenital diseases in consanguineous marriages is 2–3 times higher than in non-consanguineous ones. Therefore, this paper chooses a few common diseases caused by consanguineous marriage and will briefly elaborate on thalassemia, haemophilia, and epilepsy diseases.

Consanguineous Marriage Causes Thalassemia

Thalassemia is the world's most common hereditary disease and is a paradigm of monogenic genetic disease (Ishaq *et al.*, 2012). Moreover, thalassemia is a genetic blood disorder in which the body produces an abnormal form of haemoglobin (Tabassum *et al.*, 2021). Thalassemia is classified into two types based on the type of globin that is mutated: alpha- (α -) thalassemia and beta- (β -) thalassemia. α -Thalassemia occurs when one or more of the four α -globin genes are damaged or altered, while β -thalassemia occurs when both β -globin genes are damaged or mutated (Abu-Shaheen *et al.*, 2020). Furthermore, thalassemia is caused by two globin genes: deletion and nondeletion defects (Shang & Xu, 2017). According to Kim & Tridane (2017), thalassemia major occurs when a child inherits two defective globin genes, one from each parent. Then, thalassemia minor occurs when the child inherits one defective globin gene from only one parent.

Furthermore, thalassemia has been a burden on the healthcare systems of many countries in the Mediterranean area, the Middle Eastern and North African (MENA) region, Transcaucasia, Central Asia, the Indian subcontinent, and Southeast Asia (Abu-Shaheen *et al.*, 2020). Due to the migration of people from these regions, thalassemia populations have become a public health concern even in North America (Vichinsky, 2016). For instance, due to a consanguineous marriage tradition, the MENA region shows a high prevalence of thalassemia major and carrier populations (Dhaheri & Kim, 2018). Therefore, it has been found that consanguineous marriages lead to the increased expression of autosomal recessive disorders. Then, one of the most reported also proven risk factors for thalassemia is consanguineous marriage (Uddin *et al.*, 2017).

Consanguineous Marriage Causes Haemophilia

Haemophilia A and B are X-linked hemorrhagic disorders caused by gene variants in the FVIII (F8) and factor FIX (F9) genes. Additionally, haemophilia A and B are located on the long arm of the X chromosome (Garagiola *et al.*, 2021). Factor FVIII and factor FIX are two plasma glycoproteins that play an essential role in coagulation (Nichols *et al.*, 2016). According to Mansouritorghabeh (2015), haemophilia A is a worldwide disorder of the coagulation system. It is a male disorder, yet females with haemophilia are rarely seen in communities with a high rate of consanguineous marriages.

Furthermore, according to Raso *et al.* (2020), men are mainly affected due to the recessive X-linked inheritance pattern of haemophilia, while women are more commonly heterozygote carriers of the disease. Carriers of haemophilia may exhibit an increased bleeding tendency depending on their clotting factors. However, female haemophilia as a disease entity has so far received much less attention than haemophilia in males (S. *et al.*, 2017). For instance, homozygosity in a female most often occurs because of a cousin marriage within a haemophilia family, with the father having haemophilia and the mother a heterozygote by inheritance (Miller & Bean, 2021).

Consanguineous Marriage Causes Epilepsy

As a neurodevelopment disease, epilepsy is presented as an abrupt and episodic recurrence of sensory disturbance, loss of consciousness, or convulsion (Samia & Wilmshurst, 2020). Moreover, it is also defined as a chronic neurological condition characterised by recurrent seizures caused by abnormal cerebral nerve cell activity. It has a high incidence worldwide (Alanazi *et al.*, 2018). Furthermore, there are several types of childhood epilepsy, such as benign focal childhood epilepsy, childhood absence epilepsy, and juvenile myoclonic epilepsy (Verrotti *et al.*, 2017). Thus, those diseases may be passed on from parent to child. However, the person's risk of developing the disorder partly depends on the type of epilepsy the family member has.

According to Rafique *et al.* (2021), familial clustering of epilepsy has been proven among first-degree and, to a lesser extent, second-degree relatives and is more common in cases of idiopathic generalised epilepsies. Because of that, there is an increased risk of epilepsy among siblings of patients with idiopathic epilepsy who have parental consanguineous (Bener & Mohammad, 2017). A previous cross-sectional study of 392 patients with generalised genetic epilepsy (GGE) in Malaysia found that the Chinese had the lowest percentage of GGE (12.3%), followed by Indian and Malay (25.3% and 21.3%, respectively). The reason could be attributed to the fact that consanguineous marriage is common in certain cultures, and Indians have a previous report that proved epilepsy (29.5%) due to a parental consanguineous marriage (Lim *et al.*, 2020).

ISLAMIC PERSPECTIVE

Marriage in Islam is the union of a man and a woman, a religious duty, a moral safeguard, and a social commitment (Ahmad, 2018). Marriage is an essential issue in all religions and schools, but no school of thought or religion has cared about this issue as much as Islam (Ghodrati & Akbarzadeh, 2018). Islam places a significant emphasis on marriage, especially in selecting a spouse prior to marriage, and it provides adequate guidance on those matters (Malengo & Hamad, 2017). According to Imam Al-Ghazali, the purpose of *Maqasid Syariah* is to improve the welfare of all human beings, which lies in the protection of religion (*addeen*), soul (*an-nafs*), intellect (*al-'aql*), descent (*an-nasl*), and wealth (*al-maal*) (Rosifah *et al.*, 2019). Thus, the purpose of choosing a spouse is to protect the descent.

According to Dr Muzammil H. Siddiqi, the former President of the Islamic Society of North America, consanguineous marriages or marriages between first cousins are permitted in Islam (Al-Qaradawi, 2022). This statement is consistent with the Islamic religious leader (*mufti*) of the federal territory office's ruling (*fatwa*), which declares that cousin marriage is allowed from a Syariah perspective. Cousins are not considered members, which makes it illegal to marry (*mahram*) (Ismut, 2021). Despite

that, based on previous research, Shami *et al.*, 1994 stated that although cousin marriages are not against the law in Islam, no verse from the Islamic sacred book (*Quran*) may be used as evidence to support and reinforce cousin marriages. Allah the Almighty, on the other hand, permits marriage between those mentioned in *Surah Al-Ahzab: Verse 50*: -

O Prophet, indeed We have made lawful to you your wives to whom you have given their due compensation and those your right hand possesses from what Allah has returned to you [of captives] and the daughters of your paternal uncles and the daughters of your paternal aunts and the daughters of your maternal uncles and the daughters of your maternal aunts who emigrated with you and a believing woman if she gives herself to the Prophet [and] if the Prophet wishes to marry her.

The Quranic verse quoted above clearly shows that Muslims have practised marriages between cousins in non-believing countries since the Prophet Muhammad (PBUH) (Hitti & Watt, 1957; K. Freamon, 2019). Thus, there are some prominent examples in Islamic history, like when the Prophet Muhammad (PBUH) married his daughter Fatima to his cousin Ali ibn Talib. Next, the Prophet Muhammad (PBUH) was also married to his first cousin, Zaynab bint Jahsh, whose mother was Umaymah, the daughter of his grandfather Abd al-Muttalib.

Moreover, the fourth righteous caliph in Islam, Ali ibn Talib's daughter, Zaynab, married her first cousin Abdullah, the son of his brother Ja'far ibn Talib. Besides, the second Caliph, Umar ibn al-Khattab, also married his first cousin, Atika bint Zayd (Al-Janabi & Al-Hilali, 2019; Saniotis & Henneberg, 2012). Hence, no verse forbids marriage between relatives other than what is said in *Surah An-Nisa: Verses 22-23*: -

And do not marry those [women] whom your fathers married, except what has already occurred. Indeed, it was an immorality and hateful [to Allah] and was evil in a way. Prohibited to you [for marriage] are your mothers, your daughters, your sisters, your father's sisters, your mother's sisters, your brother's daughters, your sister's daughters, your [milk] mothers who nursed you, your sisters through nursing, your wives' mothers, and your stepdaughters under your guardianship [born] of your wives unto whom you have gone in. But if you have not gone in unto them, there is no sin upon you. And [also prohibited are] the wives of your sons who are from your [own] loins, and that you take [in marriage] two sisters simultaneously, except for what has already occurred.

Nevertheless, cousin marriages that occurred during the Prophet Muhammad (PBUH)'s time were only due to the Prophet Muhammad (PBUH)'s migration, where he was allowed to marry only his cousin who migrated with him (Begum, 2021). The Prophet Muhammad (PBUH) encouraged his companions to marry women from different tribes.

In other words, it is preferable to choose a marriage partner from outside one's family (Abdul Hadi Ismail, 2020). The reason is to avoid marriages between relatives, which can result in a very high risk of serious hereditary diseases in the offspring of such marriages (Joseph *et al.*, 2015). As a result, consanguineous marriages or marriages between cousins were discouraged rather than recommended by Islam. There is no specific guidance in the Holy *Quran* that could be interpreted as encouraging consanguineous marriages (Hussain, 1999; Naibkhal & Chitkara, 2016).

This is reinforced by the fact that the Prophet Muhammad (PBUH) discourages the practice of inter-family marriage, such as between the first cousin, fearing weak descendants, by referring to infallible recorded sayings of the Prophet Muhammad (PBUH) (*Hadith*) warning against consanguineous marriages. As an illustration, the Prophet Muhammad (PBUH) is reported to have said, “[m]arry strangers to have no weak children” [Ibn Hajar, *Talkhis al-Habir*] (Abdalla & Zaher, 2013; Akrami & Osati, 2007).

In addition, the Sixth Imam, or leader of the *Shia* Muslims and the Prophet Muhammad's (PBUH) spiritual successor, Ja'far ibn Muhammad As-Sadiq (AS), is also quoted about consanguineous marriage as stating, “[d]o not marry blood relatives since weak infants will be born” [Shahid Thani, *Masalek Alafham*]. However, only two of the fourteen infallible *Shia* leaders—according to historical evidence—have wed consanguineously (Hussain & Bittles, 1998; Nouri *et al.*, 2017).

Furthermore, the two foremost philosophers of the Sunni school of thought, Imam Shafie, and Imam Ahmad, also despise cousin marriage and have deemed it a disliked or offensive act (*makruh*). Similarly, some scholars have advised against cousin marriage, including Imam Ghazali (Zahid, 2019). In this regard, Imam al-Ghazali has quoted one of the hadiths of the Prophet Muhammad (PBUH) that translates as “[s]elect your spouse carefully in the interest of your offspring because lineage is a crucial issue.” [Mohammad Ghazali, *Ihyaee Ulum Alddin*]. Besides, there was a time when companion Umar ibn Al-Khattab noted that the Saib tribe intermarried too often and told them, “[y]ou have weakened your lineage. You should marry a stranger” [Ibn Abi Mulaykah, *Al-Talkhis al-Habir*] (Carpentieri, 2019).

Additionally, it is also consistent with the Islamic legal maxim (*Qawaid Fiqhiyyah*), which refers to the method (*Qaidah*) that harm is put to an end (*ad-dharar yuzal*), which carries the meaning that all kinds of injury and harm should be removed or eliminated (Abd. Rahman *et al.*, 2016). Therefore, based on that method, marriage between bloodlines or close cousins should be avoided to eliminate harmful and adverse effects on descendants after marriage.

Other Religious Perspectives

There is a wide diversity in the attitudes of the different major world religions and philosophies towards consanguinity (Akbari *et al.*, 2019; Kulwicki, 2021). Based on the findings of the research that has been conducted, referring to previous studies, the study found that consanguineous marriages or close-kin marriages were not limited to Muslims. However, it was also practised among Hindus, Jews, Buddhists, Christians, Parsis, and Druze who lived in Asia's southern and western regions (Agha, 2016).

However, there is a percentage that shows that in the southern states, consanguineous marriage was higher among Hindus (27.4%), followed by their Christian (18.4%) and Muslim (17.6%) counterparts (Sahoo *et al.*, 2022). Therefore, this paper will only briefly discuss other religious perspectives on consanguineous marriage, specifically Christianity and Hinduism. In Buddhism, consanguineous marriages are permitted, and there is no general prohibition within the Buddhist tradition (Kashkooli & Kazemi, 2018).

Consanguineous Marriage in Christianity

Consanguineous marriage is also common among Christians, although its prevalence is lower than among Muslims because some churches discourage consanguineous marriages by requiring special dispensation (Schellekens *et al.*, 2017). For instance, the early Christian theologian St. Augustine propagated a ban on consanguineous marriages by pointing out that marrying outside the kin group enlarges the range of social relations. (Schulz, 2016). The reason is that marriage outside the kin group can bind social life more effectively by involving a more significant number of people. However, there are specific exceptions to such general rulings that exist across religions.

For example, the Coptic Orthodox Church, also known as the Coptic Orthodox Patriarchate of Alexandria, is an Oriental Orthodox Christian church based in Egypt (Toroczka, 2016). The Coptic Church permitted marriage between first cousins, which separated from the other branches of the Orthodox faith on doctrinal grounds in 451. In 451, the Church split from other Christian churches in a major schism at the Council of Chalcedon over the nature of Christ (Salem, 2015). Moreover, within the Christian Protestant denominations, first-cousin marriage is also freely permitted. Following the Judaic guidelines on consanguineous marriage in the Biblical Book of Leviticus 18:6-18, the Society of Friends or Quakers does not recognise first-cousin unions. In addition, Quakers are also known as Friends Church, a Christian group that arose in England (Alan H. Bittles, 2015).

Consanguineous Marriage in Hinduism

All four traditions prohibit marriage within certain degrees of kinship. Nevertheless, the degrees of prohibited relationships often vary from one religion to another. For instance, Islamic law allows first-cousin marriages, while stated in modern Hindu law

under *Section 3 of the Hindu Marriage Act of 1955* prohibits them (Alan H. Bittles, 2012; Sezgin, 2019). That section explains prohibited relationships by the whole, half, and uterine blood. When the parents of the two people are the same, they are related by whole blood. Next, when the father is the same, but the mother is different, they are related by half-blood. Then, when the mother is the same, but the fathers are different, they are related by uterine blood (Saxena, 2021).

Although the *Hindu Marriage Act of 1955* makes cousin marriage illegal for Hindus, cousin marriage can be excluded if allowed by regional custom (Uberoi, 2021). According to Sahu *et al.* (2016), the research conducted on Hindu and Muslim women in Karnataka, India, found that six of the 18 Hindu participants had married a close relative, either their mother's brother or a cross-cousin. However, none of the Muslim participants was married to their mother's brother, and only two participants were married to close relatives, but both were married to maternal uncles' sons.

Additionally, consider that the *Hindu Marriage Act of 1955* forbids cousin marriages in many Hindu communities. However, the findings from earlier studies have emphasised the importance of marriage arrangements in response to female inheritance laws and also point out that cousin marriage is only one of many possible strategies to deal with the consequences of female inheritance (Bahrami-Rad, 2021). For instance, Roy (2015) shows that parents might also gift away their property to their sons to circumvent female inheritance laws.

CONCLUSION AND RECOMMENDATIONS

This research demonstrates that medical science has shown the harmful effects of consanguineous marriages in various medical disorders, rare diseases, and syndromes. Moreover, Islam and other religions have also not discouraged marriage within a family due to health problems that will happen to the spouse's children. At the same time, all religions encourage marriage outside the family to strengthen the bond and increase the social circle. To conclude, this research finishes with some recommendations to prevent or minimise the adverse effects of the issue discussed so that efforts can be made to deal with it. Firstly, research on genetic disorders should be promoted because many people with advanced education are still unaware of the consequences of consanguineous marriage. Next, government or non-governmental organisations can help improve family finances, spread public health awareness, and provide higher education to decrease consanguinity rates, especially in rural areas. Lastly, religious debates should be initiated on consanguinity and its effects. Likewise, genetic counselling facilities should be made available to at-risk families by establishing referral centres for consultation and genetic testing for consanguineous populations.

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THE USE OF ZAKAT LOGO TO OPTIMIZE CORPORATE ZAKAT COLLECTION IN MALAYSIA ACCORDING TO MAQASID ZAKAT

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Abstract

All approaches to increase the collection of corporate zakat should be intensified by the zakat institution and supported by the owners of corporate companies so that the target of annual corporate zakat collection is achieved despite the challenges that need to be passed by the zakat institution. Various initiatives have been implemented by zakat institutions such as LZNK and PPZ-MAIWP by introducing innovative methods of promoting corporate zakat collection through the use of zakat logos on corporate companies in the state of Kedah and the Federal Territory. This effort not only demands the obligation of the amil to collect corporate zakat from corporate companies, but it is also a human need for the property to ensure the blessings of corporate companies in their business when paying zakat. Thus, this article aims to discuss the concept of the use of the zakat logo in Malaysia, including its approach according to the maqasid syariah. This article will also examine the challenges faced by zakat institutions in dealing with corporate zakat collection in Malaysia. This qualitative study uses documentation, interview, and observation methods in the data collection process. The results of the study found that the use of the zakat logo on corporate companies can increase the collection of corporate zakat in addition to achieving the objective of zakat legislation through the care of a property in terms of Syariah purposes. The study also found that the main challenge faced by zakat institutions in the collection of corporate zakat is the issue of the level of awareness of Muslim traders on the payment of corporate zakat. It is hoped that this study can provide guidance and reference to zakat institutions or certain organizations in managing matters related to corporate zakat collection in facing the challenges of corporate zakat collection in Malaysia. Further research needs to be done to encourage the use of the zakat logo to be applied by all states in Malaysia so that the corporate zakat collection rate can be optimized from time to time.

Keywords: zakat logo, corporate zakat, maqasid syariah

INTRODUCTION

Zakat is the third pillar of Islam that every Muslim must pay. The shari'ah of zakat plays a role in strengthening the economy of Muslims as a medium for purifying property and sharing the wealth. The zakat institution should plan, manage and organize a more proactive strategy in line with the progress and circulation of today's times to ensure that the objectives of zakat legislation are achieved. Various

approaches and methods have been practiced by zakat institutions to ensure that zakat collection increases and the sincerity of distribution at the zakat institution level to the deserving asnaf.

Empowerment of corporate zakat collection patterns should be implemented to optimize the amount of annual zakat collection. This is because corporate zakat ranks second highest after income zakat. Meanwhile, statistics show that the corporate zakat payment rate by corporate companies is still at a low level and can be increased. With that, it has the potential to be optimized by using more recent and innovative methods to attract the interest of corporate companies to pay zakat. This is because it has a high impact on the overall reduction of the zakat collection in Malaysia.

Any initiative implemented by MAIN and the zakat center is recommended to apply the concept of maqasid sharia in doing any activity aimed at optimizing corporate zakat collection. This is because every acquisition of funds from the collection of corporate zakat is very helpful in providing more assistance schemes to the asnaf group to ensure that every need of the asnaf is met and coincides with the Islamic Shari'a. Thus, to ensure that the goal of the obligation and wisdom of zakat through the approach of using the zakat logo for corporate companies is achieved, then this approach must be based on the elements of maqasid sharia to realize it. The maqasid sharia approach in the management of corporate zakat collection is believed to be able to guarantee the trust of corporate zakat payers and the interests of zakat receivers, thus making zakat institutions in Malaysia more superior and world-class.

RESEARCH METHODOLOGY

Research design is an action plan that shows how a study is conducted. The research design serves as a guide for the researcher to collect and analyze data for the research being conducted. The research design used is based on a qualitative approach. This study is a qualitative study that uses documentation, interviews, and observation methods to obtain primary and secondary data related to the objectives of the study.

Documentation Method

The documentation method involves the analytical study of printed materials such as journals, books, articles, proceedings, newspapers, and so on. This method is used to get a more in-depth picture of the research to be carried out. To obtain secondary data related to the concept of using the zakat logo in Malaysia, researchers will refer to books and journals including the official website of each MAIN, newspapers, and MAIN social media such as Facebook and Instagram. The results of the data will be analyzed to achieve the objectives that have been set.

Interview Method

The interview method is conducted to obtain field data in more detail regarding the issue or study being conducted. The interview questions that are formed are in a question-and-answer format so that the information to be obtained is more in-depth. The main purpose of this interview is to get clear and in-depth information about the concept of using the zakat logo to optimize the corporate zakat collection.

Observation Method

Observational methods are used to measure research variables. The observation method is an alternative method for gathering information and data collection. Researchers can observe a subject's behavior based on the identified variables. The observation method is carried out to understand a situation or situation, obtain data directly and there is physical evidence or findings that can be measured visually. The variables in this research consist of the use of the zakat logo in Malaysia where the observation data will be analyzed according to the reporting concept.

RESULTS

The Concept Of Zakat Logo Usage In Malaysia

Awareness of business zakat payment among corporate companies is still at a less than satisfactory level even though statistics show that business zakat collection is the second highest after income zakat. This at the same time reduces the space and potential of zakat distribution to the asnaf group and those in need more optimally. Meanwhile, among the highest zakat-paying entities under business zakat are corporate companies where they contribute as much as eight percent of the total zakat collection in 2019 (PPZ-MAIWP, 2020). Because of this, business zakat collection through corporate companies has the potential to be optimized to achieve the targeted collection. This corporate zakat collection is important to increase resources and revenue for zakat institutions as well as to further increase the provision of assistance to recipients of zakat assistance.

An innovative effort has been introduced through the use of the zakat logo by several zakat institutions in Malaysia as an effort to boost corporate zakat collection rates. The use of this zakat logo was introduced in Malaysia for the first time through the initiative of the Kedah State Zakat Board (LZKN) through the Kedah Zakat Friends Logo and the Muzakki Certificate for corporate companies in the state of Kedah. The Sahabat Zakat Kedah logo has been widely introduced in the state of Kedah and was inaugurated by Dato' Dr. Zulkifli Al Bakri in March 2020. The use of the Zakat Logo in Kedah was formed as a result of an idea from the Chief Executive Officer, LZKN which is Y.Bhg. Dato' Sheikh Zakaria Othman by looking at the potential and ability to increase the percentage of corporate zakat collection in the state of Kedah (Omar Jamaduddin, 2022). The purpose of introducing the zakat logo is to give recognition to corporate zakat payers among corporate company owners who have carried out the

responsibility of paying corporate zakat. Not only that, but it also aims to give awareness to the owners of other corporate companies to pay corporate zakat in addition to introducing to the public companies that pay corporate zakat in the state of Kedah (Omar Jamaduddin, 2022).

The Sahabat Zakat Kedah logo can be widely used either placed on the premises or posted on the company's products or goods. It can be used as an advertising medium that shows the goods belong to Muslim traders and pay corporate zakat (Omar Jamaduddin, 2022). This will have a direct effect on the increase in sales of Muslim companies which will increase the number of zakat payments of the company. Until December 2021, a total of 245 companies including Sdn Bhd, Enterprise Bhd, and cooperatives have successfully obtained the Muzakki Certificate and Zakat Payer Logo from LZNK. This proves the role of using the zakat logo can give awareness to other Muslim companies to pay zakat together.

At the initial stage of obtaining the Muzakki Certificate and the Kedah Zakat Payer Logo, the application can be made manually by filling in a form that can be found at LZNK. But starting November 11, 2021, applications must be made completely online through the Zakat On Touch (ZOT) application. Among the conditions to qualify a Muslim company to obtain the Muzakki Certificate and the Sahabat Zakat Kedah Logo is to have sufficient haul and nisab. Other conditions include payment of zakat for Enterprise companies of not less than RM 1000.00 within a year. While for the company Sdn. Bhd. zakat payment is not less than RM 3000.00 within a year. Small companies, can also make the application by paying zakat of RM 1000.00 in installments over a year (Omar Jamaduddin, 2022).

This LZNK initiative was then followed by PPZ-MAIWP through the presentation of zakat certificates to companies that pay zakat in addition to introducing the zakat payer logo as a sign of support for zakat payers. The introduction of the corporate zakat certificate and logo is seen as a very good action from the zakat institution in optimizing the corporate zakat collection. This logo factor is also expected to be one of the marketing mediums of a company, where when customers see that the company has a zakat logo, it will increase the number and loyalty of customers and will have a direct effect, which is economic profit for the corporate company.

The economic market shows that traders who pay zakat have to compete with traders who do not pay zakat either among Muslim traders or vice versa. This clearly shows that the use of the zakat logo aims to give Muslim buyers a choice to choose products, goods, or services given and sold by Muslim-owned corporate companies. This directly supports the Buy Muslim First (BMF) campaign, the benefits of which can be felt by Muslim traders through an increase in their sales volume. When the sales volume of a corporate company increases, then the payment of corporate zakat will be

paid also increases. The effect can be felt by more people who are eligible through the distribution of zakat by state zakat institutions through MAIN.

The benefit of this zakat logo can guide users to choose items that are believed to be the owner of a religious person and pay zakat from his wealth. According to Syeikh Zakaria Othman (2020), the purpose of introducing the zakat logo is not to replace the halal logo, but it was launched as a sign of LZNK's support and appreciation to corporate zakat payers consisting of corporate companies in the state of Kedah. As for companies that open branches in various states in Malaysia, including in the state of Kedah, their companies can also apply to obtain a zakat logo from the LZNK.

DISCUSSIONS

The Concept Of Maqasid Shariah

Maqasid sharia is a yardstick in evaluating a law that is fatwas. Efforts to understand a law must be in line with the requirements of the syar'a and achieve Maqasid standards that are in line with the objectives of the shari'a through the legal sources of al-Quran and al-Sunnah. Scholars have agreed that Islamic law contains its wisdom and maqasid. The law revolves around how to protect human welfare in this world and the afterlife (al-Qaradawi, 1993). The observation of these laws has resulted in a closely related interweaving between Islamic law and the Maqasid that it prescribes (al-Misawi, 1998).

The main goal of Islamic Shari'a was created to create good for people and reject evil from them (المفاسد ودرء المصالح جلب). Fuqaha interpret good (maslahah) and bad (mafsadah) including worldly and ukhrawi aspects (al-Syatibi, 1996). Scholars of maqasid science in the later age of muta'akhirin such as Ahmad al-Raisuni (1995) tried to define maqasid al-shari`ah as "Goals determined by Sharia to be realized for the benefit and interests of mankind". This definition is also defined by Ibn `Ashur (1998), `Allal al-Fasi (1993), and Muhammad bin Sa'ad al-Yubi (1998).

Imam al-Shatibi (1997) also stated that the level of human interest differs based on personal needs, socioeconomics, and so on. For this reason, Islamic Sharia must be flexible and practical in organizing Sharia objectives in line with the needs and interests of universal humanity. Based on the Islamic perspective, "Maslahah" is an interest that needs to be taken care of and can be categorized into three parts, namely al-daruriyyat, al-hajjiyyat, and al-tahsiniyyat (al-Shatibi, 1997), as agreed by scholars such as Imam al-Haramayn, al'Izz al-Din Ibn 'Abd al-Salam, and al-Ghazali,

1. Al-Daruriyyat: is the necessity of a maslahah that is needed and desired until it reaches the level of darurah. It is a situation that is very needful and urgent so it is a dangerous situation and can threaten a person's life when there is no such need.

Daruriyyat consists of the main things in the religion of al-daruriyyat al-khamsah which is to preserve religion (ad-Din), soul (an-Nafs), intellect (al-`Aql), lineage (al-Nasb) and wealth (al- Mal) (al'Izz al-Din Ibn 'Abd al-Salam, t.t). al-Dharuriyyat al-Khams is a perfect observance to be implemented by the Muslim community in various situations and conditions. The preservation that Islam creates includes all the spaces that are not found in any of the teachings before or after it. Maintenance from the priority aspect is as follows (Mohd Fikri Che Hussain, 2012):

i. Religion is more important than protecting life, intellect, offspring, and property. Therefore, Allah SWT has prescribed jihad in His way to defend the religion and belief of Islam from being defiled by the enemies of Islam. Even for those who apostatize or leave the auspices of Islam by following another religion, the appropriate law for him is the death penalty after istitab (asked to repent).

ii. Life is more important to be protected than reason, lineage, and property. This is because when a person's life is violated, then Islam puts the law of Qisas and Diyat in place of that life. If a person who is robbed has to choose between being killed, raped, or robbed, then he has to choose the lighter one so that his life is not lost. Surrendering yourself and your property is easier than being killed. Despite the loss of self-esteem as a result of being raped, a person who is forced has no sin and is held accountable for the test (ibtilla').

iii. Intellect is preferred over lineage and wealth. Therefore, Islam strictly forbids the consumption of alcohol or drugs even in small amounts. This is because it is capable of removing the mind, when the mind is not focused on sanity it will bring harm to others. Drunk people will commit acts beyond their common sense such as adultery and rape. Not least by smoking drugs, a person can commit crimes such as stealing, robbing, and killing.

iv. Heredity is more important than wealth. If a person is forced to either be raped or give up his property, then he has to give up his property to preserve his lineage and self-respect. This matter is based on the words of Allah SWT in verse 33, surah al-Nur: "And do not force your female servants to prostitute themselves while they want to protect their honor, because you desire worldly gain (treasures)" (Surah al-Nur, verse 33)

v. Property is the last preservation of its priority aspect from the five principles of al-Dharuriyyat al-Khams. Property is also an important thing that every human being needs in their lives.

2. Al-Hajjiyyat: an objective or purpose that is necessary to achieve freedom in life. All at once, it can eliminate the narrowness that can usually lead to hardship. If the goal is not taken into account, there will be many difficulties that will be faced. However, this matter does not reach the level of emergency or destroy the human life system as a whole (al-Shatibi, 1997).

3. Al-Tahsiniyyat: the act of doing a good and commendable practice or custom and avoiding things that are considered bad by a perfect mind (al-Shatibi, 1997). Al-Ghazali thinks the importance of tahsiniyyat is to help and accommodate the effort to achieve common needs or basic interests. It is complementary to matters of hajiyyat and daruriyyat (al-Ghazali, 1993).

Overall, it can be understood that there are Islamic legal methods for solving various issues that arise today. The approach of practicing the concept of maqasid syariah in all aspects is believed to be able to solve or reduce the problems that arise nowadays under current and local values so that the law is more practical and flexible.

The Use Of The Zakat Logo According To Maqasid Zakat

Islamic law leads people to better things and forbids bad things. If an individual or community implements the Sharia properly, then he has become an individual or community that obeys the teachings of Islam. Whereas if the individual or society does something bad or not good, then they have already violated the Shari'a that has been outlined by Islam itself.

Allah has commanded Muslims in the Quran through the obligation to give zakat to those who can afford it in certain groups. Zakat has its differences and uniqueness compared to charity which is not determined by rate, limit, type, and specific parties. The question that arises is, why does God tell Muslims to pay zakat? Why does Allah prescribe zakat to certain groups only?

The basis of maqasid Syariah is centered on maslahah. In principle, al-maslahah is to reap benefits and avoid harm by preserving the goals of Syariah (Imam Al-Ghazali, 1997). The requirements of worship are divided into two, i.e. worship in the form of badaniyyah (members) and maaliyah (property). The achievement of the maqasid of zakat is also divided into three angles, namely the individual, the family, and the community. Allah says in surah at-Taubah verse 103:

خُذْ مِنْ أَمْوَالِهِمْ صَدَقَةً تُطَهِّرُهُمْ وَتُزَكِّيهِمْ بِهَا وَصَلَّ عَلَيْهِمْ ۚ إِنَّ صَلَاتَكَ سَكَنٌ لَهُمْ ۗ وَاللَّهُ سَمِيعٌ عَلِيمٌ ١٠٣

"Take zakat from some of their wealth, with that zakat you clean and purify them, and pray for them. Indeed, your prayer is (become) peace of mind for them. And Allah is All-Hearing and All-Knowing."

The word خُذْ is God's command to Rasulullah SWT as an amil to collect zakat. Amil or the zakat institution has the right to implement any new method or innovation in the zakat collection to give awareness to zakat payers to fulfill their obligations. Innovations such as those implemented by LZNK through the use of zakat logos for corporate companies are believed to be able to increase the rate of corporate zakat collection better than in previous years without the use of zakat logos. Based on the verse as well, Allah shows that the main purpose of zakat is as a method of purifying

the soul through the word *تُطَهِّرُهُمْ*. The verse also explains to us the obligations and benefits of zakat itself.

From an individual point of view, the benefits of zakat are related to the elements of giving and receiving. The receiving party does not need to make a notification that they are the group receiving zakat while human nature likes property and wealth. Therefore, the verse does not justify the purification of property and eases the burden on the recipient. Allah mentions in the verse the part that generally individuals do not want to do and if a person knows the command to pay zakat, it is difficult for them to accept because of human nature that loves wealth. With that, the word *تُطَهِّرُهُمْ* returned to zakat producers who can purify their souls physically and internally.

While for the family, the maqasid of zakat can be achieved when parents can take care of the welfare and provide the best comfort and education to their children through sales returns obtained from their company's profits. Parents who love possessions excessively will give birth to negative traits and the traits shown will be followed by their family members. Among the negative traits are such as miserly, greed, as well as cruelty, and cruelty. This is because each recipient of zakat has their rights over everyone's property. However, love that is more for the property will give many problems to people that can destroy the institution of the household itself. Therefore, the importance of using the zakat logo is seen as a catalyst for the economy of a family that has a business. Multiplied profits by a business whether Small and Medium Industries (SME) or the like can be achieved through the latest techniques or innovations which is the use of the zakat logo. The use of the zakat logo acts as a promotional method for companies or their products that can bring a lucrative return through its various benefits.

Finally, the role of the zakat logo from the point of view of the maqasid of zakat is also social, that is, it can help the weak, or called asnaf. There are eight types of asnaf categories prescribed by Islam such as asnaf fakir, miskin, amil, muallaf, ar-riqab, fi sabilillah, al-gharimin, and ibnu sabil. The shari'ah of these categories of asnaf is so that all the needy groups do not miss out on receiving zakat money and ensure justice for all parties. Optimum zakat collection results will fight poverty in all Islamic countries and give birth to a quality, harmonious, prosperous, educated, and civilized society.

The objective of the maqasid of zakat is that there is a production of wealth and its nature that benefits people in need. Because property management is difficult to manage in this day and age because society is growing and asnaf is difficult to find, for example, such as a residence in a garden area causes less exposure to the asnaf. So, the role of the zakat institution is very important as a member who collects zakat so that the collection can be made optimally. The initiative of using the zakat logo

implemented by the zakat institution in Kedah against corporate companies to some extent enlivened the existing amount of collection to a better level.

In general, money will increase with the practice of charity and Islam helps people with property without denying the material aspect. Islam also emphasizes the balance between spirituality and materiality because God made every country have a source of income. Therefore, the maqasid syariah approach is the best approach to ensure that any initiatives and actions of zakat institutions to optimize corporate zakat collection are in line with Syariah. Zakat management that uses the maqasid syariah approach in any action aimed at increasing zakat collection is believed to be able to guarantee the trust of zakat payers and the interests of zakat recipients in turn making zakat institutions in Malaysia more superior and of international standard.

CONCLUSION

In conclusion, the use of zakat logos on corporate companies is seen as an appropriate alternative measure in optimizing corporate zakat collection. Through the use of this method, it can convince consumers to buy goods or products under the company's brand. As a result, the economy of the Muslim community will increase through its corporate image which is increasingly trusted and known. This effort also supports the recommendation to prioritize the purchase of Muslim companies. Not only that, but the impact can also be felt by the asnaf group who need help through the results of one of the corporate zakat collections by state zakat institutions. Thus, the application of the use of zakat logos to corporate companies acts as a very accurate step to increase the zakat collection of existing businesses. Therefore, a detailed study is very necessary to study and see the best approach in implementing the use of the zakat logo by corporate companies in Malaysia in the future. It is believed to be able to be the policy and policy of the government as well as zakat institutions in optimizing corporate zakat collection according to the correct method in line with the requirements of Syariah so that it can guarantee the continuity of asnaf development.

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FINANCIAL INCLUSION THROUGH CROWDFUNDING IN MALAYSIA: A REVIEW

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Abstract

The aim of this study to review the position of Malaysia in terms of financial inclusion and crowdfunding. The goal of financial inclusion is not only to enhance a country's economic growth but also to eradicate poverty and reduce the gap between the rich and the poor within a country. Crowdfunding can be used as a banking alternative, and countries with a large number of crowdfunding platforms have demonstrated great financial inclusion. By expanding access to capital and displacing unregulated lenders, crowdfunding has the potential to promote financial inclusiveness in the society. This study employs content analysis using secondary data to explore financial inclusion initiatives that can be achieved through crowdfunding platforms. It is hoped that the review would be useful for understanding and promoting crowdfunding as one of the important tools to achieve financial inclusivity in Malaysia. The paper will be useful to researchers, professionals and others concerned with financial inclusion to understand the importance of crowdfunding as one the mechanisms to promote financial inclusiveness. Other than revealing ambiguities, gaps and contradictions in the literature, this paper provides information and guidance for other researchers wishing to embark on research on financial inclusion and crowdfunding.

Keywords: Financial inclusion, crowdfunding, poverty

INTRODUCTION

Due to the geographical location of the place and the context in which financial inclusion is utilised, there is no uniform definition of this terminology (Chinoda & Mashamba, 2021). Financial inclusion may be defined as the supply of financial services at a fair and affordable cost (Ansari & Bahari, 2021). Information on the categories of financial services is critical for promoting financial inclusion. Previous research on financial inclusion has focused on savings and credit (see, for example, Bharadwaj & Tavneet, 2020; Ouma, Odongo, & Were, 2017). Only several mentions other financial services such as banking and insurance (Heydenrych & Luiz, 2018). In determining which financial services are deemed vital for financial inclusivity, the World Bank (2022) has identified four major categories of services to which everyone in society should have access - banking transactions, savings, credit, as well as insurance.

Malaysia, in particular, has seriously addressed the agenda of financial inclusion as it serves as an essential mechanism to promote balanced and sustainable economic growth and development. The Malaysian government introduces the New Economic Model (NEM) in 2009 which aimed to transform Malaysia into a high-income economy underpinned by sustainable growth. One of the major desired results of this vision is inclusivity, combined with high income and sustainability (Bank Negara Malaysia, 2016). In order to meet the mandate of financial inclusion, a holistic framework has been articulated within BNM's Financial Sector Blueprint (FSBP) 2011-2020 to improve the overall well-being of communities in terms of convenient accessibility, high take-up, responsible usage, and high satisfaction with financial services. In achieving the desired outcomes of convenient accessibility and high take-up specifically, the strategies intended to provide both innovative channels as well as innovative products and services. This can be achieved through digital finance. "Digital financial inclusion" is a growing phenomenon (Global Partnership for Financial Inclusion, 2016) that provides innovative ways to reach underserved people.

Over the past few decades, technology has drastically impacted every aspect of people's lives. Financial services are without exception. The intersection of finance and technology has facilitated the financial inclusion agenda. Given that over 50% of people in developing nations own smartphones, digitising financial services can contribute to broader financial inclusion (Demirguc-Kunt et al., 2018). As compared to conventional financial services, digital finance is more accessible and affordable for the underserved group in developing countries to access to deposit and lending services within the mainstream financial system (Haider, 2018). Fintech is the current way of delivering financial services through technology and crowdfunding (hereafter referred to as CF) is an application of financing that utilize this mode (Baber, 2019). Over the past ten years, crowdfunding has gained popularity and established itself as a key alternative source of funding for individuals, businesses, creative enterprises, and non-profit organisations (Regner, 2020; Fanea-Ivanovici & Baber, 2021). The four types of crowdfunding have been agreed upon by the majority of authors; equity-based, lending-based, donation-based and reward-based (Dorfleitner et al., 2017; Kim & De Moor, 2017; Kirby & Worner, 2014).

This paper revisits research conducted in the area of financial inclusion and crowdfunding with a special focus on Malaysia. This study also provides a review of current crowdfunding platforms in Malaysia that has plausible potential to drive financial inclusion. The review aims to synthesize current crowdfunding platforms by exploring and identifying types of financial assistance offered to the needy.

The paper is structured as follows. The next section provides an overview of financial inclusion in Malaysia and the background of crowdfunding especially its

current trends in Malaysia. The methodology is presented in the following section followed by results and discussion. The final section concluded the study.

LITERATURE REVIEW

Overview of Financial Inclusion

The meanings of financial inclusion have been mentioned in many previous studies, for instance, “access to financial services”, “responsible and sustainable provision of financial services”, “affordable delivery to disadvantaged and low-income segments of society” and “broad range of services of high quality, with attention to consumer protection” (Ben Naceur et al., 2015). In simple understanding, financial inclusion indicates that an individual has an account with a formal financial institution, which allows them to save and borrow money (Baber, 2021). According to Zins and Weill (2016), the major criteria for financial inclusion include holding a bank account, saving and borrowing money.

According to Bruhn and Lovo (2014), financial inclusion brings economic prosperity and assists excluded persons in increasing their income by either/both saving and borrowing money. People who were previously financially excluded may now be able to spend on education, save, and start businesses, ultimately contributing to poverty reduction and economic growth (Ozili, 2018).

Financial inclusion strives to increase the number of individuals who are financially excluded from the formal financial system, by holding at least a bank account, to create inclusive economic growth (Beck et al., 2007). Financial inclusivity offers various benefits; increased resource efficiency, social and political strength, promote innovation, and economic growth (Ahamed & Mallick, 2019). People frequently face unforeseen financial crises such as illness, death and unemployment. With access to finance, people would be able to save money for such situations or borrow money from financial institutions (Collins et al., 2009).

Ozili (2018) proposed that digital finance can assist achieve greater financial inclusion since many individuals who do not have a financial account own a mobile phone. According to Malady (2016), persons who are excluded from the financial system may have access to technology, but there is a lack of confidence and reliability in electronic channels. Manyika et al. (2016) attributed digital finance for assisting banks in saving expenses by cutting client queuing times, reducing paperwork, and even reducing the number of branches.

Poverty alone cannot be blamed for financial exclusion; there are several additional causes of purposeful exclusion from the official financial system, such as religion, culture, and lifestyle. The intended financial exclusion problem may be remedied by providing communities with customized financial services, such as Islamic finance and microfinance (Baber, 2021) as well as with the infusion of digital elements to boost financial inclusion. The role of Fintech in driving financial inclusion

is supported by several studies (see for example, Baber, 2021; Venkatesh, 2019; Durai & Stella, 2019; Global Partnership for Financial Inclusion, 2016).

Crowdfunding at a Glance

As crowdfunding is a novel business investment concept, its definition is still up for discussion. Crowdfunding is literally inspired by notions such as microfinance (Morduch, 1999). It is composed of the terms "crowd" and "funding," which relate to the crowd and financing, respectively; in other words, it is financing by the crowd. Nonetheless, the term derives from the concept and word "crowdsourcing" which was first used by Jeff Howe (Howe, 2006).

Definitions of crowdfunding are varying (see for example, GPFI, 2016; European Commission, 2016; IOSCO, 2015; World Bank 2013). However, they share the following common key components: (i) raising funds in small amounts, (ii) from many to many, and (iii) using digital technology (Jenik et.al., 2017). As funds are channeled directly from funders to fundraisers through a given platform, the key disruptive effect of crowdfunding is the reduction level of intermediation by traditional financial institutions to a minimum (Terry, Schwartz, & Sun 2015).

Crowdfunding is a method of raising capital by combining the effort of family, friends, customers and investors. CF is growing as a new means to attract funding and financing for individuals, small businesses and entrepreneurs around the world. The method also helps people to find investors or contributions to their business (Baber, 2021). According to Jenik et al., (2017), CF is a part of financial innovation called alternative finance where it combines crowd and finance by using technology. Regardless of the growth of CF, there are still trust issues about these projects. As is the case for other online financial platforms (such as banks), CF platforms also involve risks and uncertainties.

Crowdfunding may take several forms (Slimany & Ziky, 2021; Jenik et al., 2017). The feature of the contribution (gift, loan/debt, or stock) as well as the nature of the compensation (proceeds, interest, or dividends), if any, dictate the forms. The most common categories of crowdfunding are reward, equity, lending/debt and donation (Slimany & Ziky, 2021; Dorfleitner et al., 2017; Kim & De Moor, 2017; Kirby & Worner, 2014). The first category of crowdfunding is reward-based, and it is an asset class in exchange for a reward, gifts, or products. The second one is the equity-based investment, which aims to provide investors with a percentage stake. Since information asymmetry and a lack of publicly available data in the traditional sense, this form appears to be the riskiest. The third type is based on lending. Crowdlending is the granting of a loan to a company or an individual. It is also known as peer-to-peer (P2P) credit, which refers to a loan granted without the involvement of a bank. The last form is donation-based or charity giving. The donations are simple, unrequited gifts that are typically used to fund ideas and projects in the social and charitable fields. Non-profit organizations (Macht & Weatherston, 2015; Pichler &

Tezza, 2016), or individuals are frequent recipients, for example, to fund medical treatment.

Previous studies have shown that different platforms present different levels of risk and uncertainty. Schwienbacher and Larralde (2010) claim that the disclosure requirements may differ among investors. For equity- and lending-based CF, potential investors demand more information, because they are exposed to higher levels of risk and uncertainty. Since the different CF platforms present different types of risk, some countries use initiatives to protect their investors, specifically in equity- and lending-based CF. For example, in the United Kingdom, both of these platforms are protected under the Financial Services and Markets Act 2000; their task is to protect consumers from high-risk forms of finance by requiring the operations of the company to be authorized. Meanwhile, in the USA, protection is provided under the JOBS Act 2012. Malaysia is the first country in ASEAN to implement a regulatory framework to facilitate equity CF (Mohd Nor & Hashim).

Financial Inclusion and Crowdfunding

Financial inclusion is the opposite coin of financial exclusion. Research in the area of crowdfunding and financial inclusion is still rare (Slimany & Ziky, 2021). According to GPMI (2016) in the context of financial inclusion, crowdfunding refers to a market-based financing technique where funds are raised from large numbers of individuals or legal entities in small amounts, bypassing traditional financial intermediaries, and using mobile phones and online web-based platforms to connect with borrowers, whether to fund a business, a specific project, or other needs.

Crowdfunding can promote financial inclusion in various ways. Firstly, since banks are profit-driven, they are likely to disfavor poor and low-income customers. Lending-based crowdfunding can be an effective tool to address this issue. Additionally, crowdfunding acts as a new financial alternative to overcome issues that arise from traditional finance and to cope with recent digital advancements. Crowdfunding has the potential to close the supply-demand gap for entrepreneurial finance (Bruton et al., 2015).

Lending-based crowdfunding provides more transactions and sector diversity, as well as reduced commissions and costs (Hollas, 2013; Marchese, 2014) to benefit women, migrants, young, and low-educated entrepreneurs who encounter difficulty in credit access and conditions (Marchese, 2014). According to Bholat & Atz (2016), rivalry in lending-based crowdfunding can benefit consumers by decreasing the price of unsecured loans and motivating banks to develop their digital products.

Comparingly, equity-based crowdfunding is primarily used to provide equity financing to enterprises, and it is ideal for start-ups and SMEs. Many studies have proven that equity-based crowdfunding may help entrepreneurs finance their businesses (Slimany & Ziky, 2021). In addition, according to Schwartz (2013),

“securities crowdfunding is an ideal platform for bringing venture capital to rural areas”. The author shed lights that crowdfunding removes the geographic constraint that has long impeded rural entrepreneurship by allowing rural entrepreneurs to connect and obtain financing from angel investors through an electronic platform.

Moreover, donation-based crowdfunding is based on charitable contributions to a public good where the crowdfunding platform acts as a middleman between charities and non-governmental organizations (NGOs). This channel has the potential to address financial literacy issues, provide life skills and entrepreneurship training as well as improve health and safety through the provision of seed funding for a variety of programs to stimulate financial inclusion (Roig-Tierno et al., 2015).

In a nutshell, crowdfunding is a phenomenon that, could become an excellent enabler and safe environment to provide access to finance. Crowdfunding may potentially advantage disfavoured people through a few ways; improve access to finance for borrowers who are unserved or underserved; develop low-cost and community-based insurance products; and facilitate access to digital investments by people who currently have limited or no options to gain financial returns on their savings (Jenik et al., 2017).

METHODOLOGY

This study utilizes content analysis to examine the current financial inclusion agenda in Malaysia and to explore the crowdfunding platforms in Malaysia which promote the financial inclusion agenda. Content analysis is defined as a method used in research to identify the pattern in recorded communication by collecting data systematically from a set of text (oral, written, or visual). It was extensively applied in multiple disciplines such as anthropology, cognitive science, media studies, and many social science disciplines. The objective of content analysis is to produce meaning and organize the data collected to produce a realistic conclusion (Bengtsson, 2016). Others will utilise this strategy to understand the reference and logical interpretation for certain texts, as well as how terminology has been employed. (Handayani, et al., 2019).

FINDINGS AND DISCUSSION

Financial Inclusion Agenda in Malaysia

The goal of financial inclusion is not only to boost a country's economic progress but also to eradicate poverty and close the wealth gap within a country. The New Economic Model (NEM) is introduced by the Malaysian Government in 2009 to support sustainability agenda through financial inclusion. Inclusiveness, alongside high income and sustainability, is one of the important desired outcomes of this vision (Bank Negara Malaysia, 2016).

The Central Bank of Malaysia Act 2009 further strengthened Bank Negara Malaysia's strategic focus on driving financial inclusion programmes. In order to fulfill the mandate of financial inclusion, a holistic framework has been articulated within BNM's Financial Sector Blueprint (FSBP) 2011-2020 to improve the overall well-being of communities in terms of convenient accessibility, high take-up, responsible usage, and high satisfaction of financial services (see Figure 1).



Source: Bank Negara Malaysia (2016)

Figure 1: Holistic Financial Inclusion Framework for 2011-2020

The financial inclusion framework aimed to create an inclusive financial system that best serves all members of society, particularly the underserved, by providing access to and utilisation of quality, affordable essential financial services to meet their needs and contribute to greater shared prosperity. The vision's accomplishments are assessed by the expected results for clients, which include convenient accessibility, high take-up, responsible usage, and high satisfaction with financial services. The FSBP has recognised 10 primary action plans focused on strategic results via innovative channels and goods and services, financial knowledge empowerment of the disadvantaged population, and building financial institutions and infrastructure. These action plans are currently being carried out and are at varying degrees of completion.

BNM also has been a prominent supporter of the financial inclusion agenda on a global scale. This is demonstrated through substantive contributions and active involvement in the Alliance for Financial Inclusion (AFI) and the ASEAN Working Committee on Financial Inclusion (ASEAN Working Committee on Financial Inclusion) (WC-FINC). Furthermore, BNM has partnered with the Irving Fisher Committee on Central Bank Statistics, AFI, the Organisation for Economic Co-

operation and Development (OECD), and the World Bank on financial inclusion capacity development programmes for global policymakers. BNM has also collaborated with Asian Banking School to provide leadership and technical training to regional microfinance practitioners⁸.

In terms of financial inclusion assessment, BNM has established an index of financial inclusion (IFI) to assess the efficacy of formal financial institutions in providing financial goods and services to all sections of society. This is a critical instrument for tracking the development of efforts and measuring the impact of policies aimed at increasing access to the financial sector. A national IFI also gives a holistic picture of the development of an inclusive financial system, therefore supporting the government's reform efforts (Abd Rahman, 2013).

Current Crowdfunding Platforms Related to Financial Inclusion Initiatives in Malaysia

Crowdfunding is a model that can promote financial inclusion as a quick route to alternative capital to gain money. CF has the potential to attain financial inclusion. In other words, CF can be an excellent opportunity for developing economics where it can reduce poverty. Recently, CF platform also plays an important role to help people affected by COVID-19 especially those in the low-income category. During the pandemic, most organisations face financial disruptions. To make it worse, when the government has imposed a movement control order, people cannot go anywhere and are stuck at home. Many communities rely on NGOs and social enterprises to help them, especially those affected by to COVID-19.

As a solution, CF platforms become one of the 'places' for people who are interested to help other people. In fact, a number of project owners from social enterprises and NGOs have stepped up to support people who are affected by promoting their projects using the CF platform. For instance, projects that relate to social enterprise to help underprivileged families. By using Kitafund and Kita Bantu.com platforms which partner with NGOs, the projects have successfully distributed supplies that include rice cooking oil, flour, salt, sugar and other essential items for daily usage for needy families. The above examples signify the extension of financial inclusion practice through CF.

On top of those, there are several other CF platforms that contribute to the financial accessibility agenda which not restricted or specifically responded to COVID-19. Table 1 presents examples of CF platforms in Malaysia that support financial inclusion.

⁸ For more details on the activities and achievements from these collaborations, refer http://www.bnm.gov.my/index.php?ch=fi&pg=fi_ovr&ac=471&lang=en

Table 1 Examples of crowdfunding platforms in Malaysia that support financial inclusion

Crowdfunding platform	Background	Target
Propeller Crowd Plus (PCP)	PCP has a track record of SME companies	SMEs
PitchIn	PitchIN is widely recognised as Malaysia’s national crowdfunding platform. One of the very exciting platforms to have achieved a lot of success with startups. PitchIn was Malaysia’s biggest ECF platform in 2021, accounting for 38% of all funding raised through equity crowdfinancing campaigns in 2021 (RM 84.3 million (US\$19 million). Apart from being a rewards-based crowdfunding platform, PitchIN also operates as an equity crowdfunding platform.	Startups
MyStartr	MyStartr is the Malaysia’s largest crowdfunding platform for businesses to bring their creative projects into reality. With RM 46.9 million secured in 2021, Mystartr recorded one of the strongest growth rates in 2021, with total funding raised jumping 179%.	SMEs
Crowdo	Popular as a Peer-to-Peer (P2P) lending platform and has a track record of startups	Individuals and startups
Ata Plus	AP has a track record of funding social enterprises. AP aims to democratise financial inclusion by matching capital with exciting businesses.	Social enterprises
Eureec	Has reportedly funded businesses in the UK and the Middle East	SMEs
Ethis Group	Ethis recently was awarded Malaysia’s first Shariah-compliant Equity Crowdfunding in late 2021, licensed by Securities Commission Malaysia.	Individual
GlobalSadaqah.com	Focuses on Islamic social finance. It helps to match charity funds for sadaqah, zakat (a form of wealth tax) and waqf (a form of endowment made for religious purposes) from both the public as well as financial institutions such as Islamic Banks. Donations are made to high-impact charity campaigns.	Individuals & SMEs
LaunchGood.com	Established its representative office in Malaysia, it is the world’s largest donations and reward Islamic crowdfunding platform, based in the United States. As of March 2018, it has raised US\$35 million in over 102 countries and funded 3,274 campaigns, with a large emphasis on personal fundraising campaigns, while also raising funds for disaster relief and humanitarian aid in conflict zones.	Individuals

Source: Adopted and added from Lim (2022), Fintech News Malaysia (2022) and Mahmoodul Hasan (2021).

Financial Inclusion through Crowdfunding: Opportunities for Low Income Group and Small and Medium Enterprises (SMEs)

As has been suggested by Iqbal & Mirakhor (2013), conventional finance is not entirely successful in addressing the issue of being financially excluded as the existing conventional financial instruments do not really reach the poor. Crowdfunding has the ability to help with financial inclusion efforts by increasing access to finances and financial assets (Jenik et al., 2017). Crowdfunding has been referred to as financial innovation, FinTech, the fastest-growing financial business, and the next big thing in finance. The term "crowdfunding" often refers to a technique of financing in which modest sums of money are raised from a large number of individuals or legal organisations to finance enterprises, specialised projects, individual consumption, or other needs. It entails avoiding traditional financial middlemen in favour of using online web-based platforms to link fund consumers with retail funders. Crowdfunding definitions vary, but they frequently include the following fundamental components: (i) raising funds in small amounts, (ii) from many to many, and (iii) utilising digital technologies (Jenik et al., 2017).

As a result of the technological advancements (European Commission 2016) also known as FinTech and the impacts of the 2008 financial crisis, a new type of crowdfunding has emerged, offering up new options for innovation (Slimani & Ziky, 2021). Crowdfunding platforms are emerging as a result of the continuous digitalization of processes and communication, as well as the rise of internet communities, and operate as facilitators, connecting needy individuals or organisations with possible donors.

Specifically, CF could drive financial inclusion through the following opportunities:

i. Enhanced access to finance

According to World Bank (2013), up to 344 million people in developing countries have the ability to participate in crowdfunding. Debt crowdfunding in particular, as a type of digital credit, is quite important. Crowdfunding platforms may be positioned to assist MSMEs, start-ups, and people with little to no credit history due to its alternative scoring feature. Crowdfunded loans then may become a gateway to traditional lenders, because they will allow fundraisers to build their credit history over time.

Considering that transactions can be completed more rapidly and inexpensively, crowdfunding platforms may also be able to outcompete traditional lenders. Therefore, crowdfunding can assist those who are needy and have limited access to formal financial institutions to manage their spending and deal with financial instability (such as job loss, illness, crop failures, natural disasters, or accidents) without having to resort to drastic measures like reducing food consumption or selling off valuable assets (DFID 2012). The speed of

crowdfunding transactions and its adaptability to different use cases are crucial factors in facing emergency scenarios in general (UNOCHA, 2015).

In countries with underdeveloped capital markets and a dearth of venture capital offerings, the problems of limited access to finance and a lack of market-based financing are alarming (IFC and McKinsey 2010). Equity crowdsourcing could serve as a crucial tool for SMEs to close the funding gap that exists in the market by reducing transaction costs and information asymmetries. This could set the scene for other market-based funding opportunities to develop over time, especially in the presence of an adequate regulatory framework.

ii. Innovative models

Crowdfunding has the potential to accelerate the digitization of traditional forms of finance. With mobile money, digital credit, and digital microinsurance, new technologies have already changed the commercial sector. Crowdfunding platforms may follow the same trend by applying basic financial products and services, as well as by adapting new technology to supplement existing financial institutions. Table 2 below shows examples of opportunities provided by the innovative CF models worldwide to attain financial inclusion.

Table 2 Examples of potential innovative crowdfunding models targeting emerging markets and developing economies (EMDEs) for financial inclusion

Crowdfunding platform	Background	Target
M-Changa	A Kenyan crowdfunding platform that “digitizes” the practice of “Harambee”—community fundraising— by allowing people in the same community to use their mobile money to make donations to individuals (e.g., to support a relative’s education) or to the community causes.	Individual
Orange Collecte	Orange, a mobile network operator in Côte d’Ivoire, has established a mobile crowdfunding platform. Private individuals and charities can use this platform to fund personal (weddings, birthdays, etc.) and philanthropic projects by making an appeal via their mobile network. Investors can then donate funds using their Orange Money electronic wallet.	Individual
eMoneyPool, Monk (an app-based crowdfunding), and Puddle	Digitization of the rotating savings and credit associations Practice.	Individual
Kiya	The platform has helped facilitate more than 1 million loans from funders in developed economies to low-income entrepreneurs in developing countries.	SMEs

Crowdfunding platform	Background	Target
Babyloan	French platform dedicated to fighting poverty and aimed at small entrepreneurs without access to the financial system. It has teamed with Total to create the first crowdfunding platform dedicated to energy access. The alliance intends to foster the development of local microbusinesses that will build distribution networks to reach isolated areas in Africa, Asia, and Latin America.	SMEs
EmergingCrowd	An equity crowdfunding platform that offers retail investors the opportunity to directly buy shares and bonds in companies based in emerging markets.	Individual
Homestrings	Provides investment opportunities in real estate, financial services, telecoms, and SMEs in 13 African countries.	Individual & SMEs
Farmable.me	Ghanaian crowdsourcing platform aiming to offer funds to alleviate the country's reliance on imported beef. Online investors who invest in a cow through the Farmable website become "CowBackers," and they are linked to their own cow on a real farm in Ghana. Each cow costs \$500 and is comprised of "cowshares." CowBackers can fund a whole cow or invite friends and family to split a cow, a practise known as "CowSharing."	Country/ Government

Source: Adopted and added from Jenik et al. (2017).

iii. Access to a new asset class

Crowdfunding provides customers with access to investment alternatives that are currently broadly unavailable to them at the BoP. According to a new theory of change for the microfinance business (Gash & Gray, 2016), poor households' use of financial services helps them anticipate, adjust to, and/or recover from the consequences of shocks in a way that protects their livelihoods, lowers chronic vulnerability, and enables growth (resiliency).

Aside from credit and insurance, asset building (saving, investment) can help attain more resiliency. Crowdfunding may provide such an investment opportunity in the future, as excluded and underserved customers presently have exceptionally limited access to formal financial products built for resilience and asset creation.

Due to the few options that this disfavoured group has, they are vulnerable to a range of risks, including fraud. Many people, including this underserved segment, have been victims of fraudulent investment schemes in recent years (see for example, Kamau 2016).

CONCLUSION

Crowdfunding is a promising way to promote financial inclusion. Crowdfunding is viewed as a quick and inexpensive way to raise cash, and its potential audience reach is boundless, owing to the increasing use of digital advances such as smartphones. Lending-based crowdfunding alleviates poverty by lending to low-income and low-income clients who cannot access traditional sources of credit. Individuals seek capital gain from cheaper interest rates as a consequence of contact with lenders, and their bond rating improves as a result of their strong willingness to repay loans. Equity-based crowdfunding allows small firms that are underserved by traditional contributors to make up the difference for the general public.

Nonetheless, despite the potential benefits indicated, crowdfunding has yet to have a meaningful influence on financial inclusion. The essential test of crowdfunding in terms of how much of it is utilised to drive and promote financial inclusion as well as economic growth is warranted rather than to generate cash fast and inexpensive way to finance unsustainable and risky investment opportunities, for example.

After all, with an increasing emphasis on financial services' social duties, crowdfunding could be viewed as an innovative tool to increase financial inclusion. Adequate legal and regulatory frameworks, tested credit scoring models, improved access to technology, and increased awareness and trust become important enablers and support to the agenda.

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CRITICAL SUCCESS FACTORS AND CHALLENGES IN THE DEVELOPMENT OF HIGHER EDUCATION FOR SUSTAINABLE DEVELOPMENT MODEL

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Abstract

The sustainability of higher education institutions is seen to benefit the long-term sustainability of the institutions. It provides the institutions with environmental sustainability, economics sustainability, institutional sustainability and integrated sustainability. Knowledge and understanding of environmental sustainability-related issue helps people becoming more aware and responsible towards the environment and sustainable project. Based on past studies, there is a gap in sustainable development implementation in higher education and this is a challenge for this particular educational sector. This paper focused on several challenges and these challenges for sustainable development can be determined in order to improve the performance of higher education, particularly in Malaysian Public Higher Institutions. The discussions in this paper is non other than to assist related parties to improve higher education sustainable development in Malaysian Public Higher Institutions. Therefore, the paper discusses on the critical success factors of sustainability in HE, higher education and sustainability, and challenges of sustainability in higher education.

Keywords: *Sustainability, Higher Education, Critical Success Factors*

INTRODUCTION

Higher education is uniquely placed to play a leading role in the attainment of sustainable development. This catalyst potential needs grounding, however, in a context where universities and colleges are currently seen as contributing to the sustainability crisis. Sustainability challenges the current paradigms, structures as well as predominant practices in higher education: this is a consistent message found throughout the literature. Universities and colleges are facing this reality as they seek to meaningfully contribute to sustainability (Tilbury, 2011). Scholars argued that this requires going beyond the integration of key ideas in existing curriculum; the commissioning of a new sustainable building or supporting the sustainability action projects which often occur in the fringes of the institution. Instead, the sustainability journey engages universities and colleges in a quest for interdisciplinarity,

participatory pedagogies, 'real world ' research and the opening of institutional boundaries so that the notion of sustainable communities is extended beyond university and college walls. Tilbury (2011) further proposed that a systemic or connected view of sustainability across institutions is required to transform the educational experience of students and lead social change for sustainability.

This paper focused on several challenges and these challenges for sustainable development can be determined in order to improve the performance of higher education, particularly in Malaysian Public Higher Institutions. It is also aimed to assist related parties to improve higher education sustainable development in Malaysian Public Higher Institutions. Therefore, the paper discusses the critical success factors of sustainability in HE, higher education and sustainability, and challenges of sustainability in higher education.

SUSTAINABILITY AND HIGHER EDUCATION

Sustainability means meeting our own needs without compromising the ability of future generations to meet their own needs. In addition to natural resources, we also need social and economic resources. Sustainability is not just environmentalism. Embedded in most definitions of sustainability we also find concerns for social equity and economic development. While the concept of sustainability is a relatively new idea, the movement as a whole has roots in social justice, conservationism, internationalism and other past movements with rich histories. By the end of the twentieth centuries, many of these ideas had come together in the call for 'sustainable development.'

According to Salame (2010), the assumption of human culture has been that the beauty and bounty of earth would be transferred across generations, that the process of education would transfer the values, skills, and knowledge to survive and thrive in the cultural and natural systems of which we are a part. Universities have had, in the modern world, a pivotal position in defining education for this task. Yet certain core ideas embedded in disciplinary thinking and the practice of those ideas, are increasingly problematic. Hence, a challenge to higher education is to reconsider its disciplines, its institutional practices, and, indeed, its mission to account for economic and human development that is sustainable.

Environmental Sustainability

According to the Office of Sustainability, University of Alberta (2021), Sustainability could be segregated into three major categories – environmental sustainability, economic sustainability, and social sustainability. First, in discussing about environmental sustainability, ecological integrity is maintained, all of earth's environmental systems are kept in balance while natural resources within them are consumed by humans at a rate where they are able to replenish themselves. In the

realm of economic sustainability, human communities across the globe are able to maintain their independence and have access to the resources that they require, financial and other, to meet their needs.

Economic systems are intact and activities are available to everyone, such as secure sources of livelihood. In social sustainability, it is understood that universal human rights and basic necessities are attainable by all people, who have access to enough resources in order to keep their families and communities healthy and secure. Healthy communities have just leaders who ensure personal, labour and cultural rights are respected and all people are protected from discrimination.

The understanding of the importance to align higher education with the needs of sustainability is broad, and the world is a big, diverse places. For sustainability to remain a relevant, useful, many higher educational institutions put together a working definition of sustainability for their institution tool and it is important that it adapt to the local context. Many higher educational institutions al over the world declared that they are committed to a continuous effort to instill sustainability into the many aspects of university life, on their campuses, in their institutions, and in the larger community of which they are part. Sustainability is rapidly making its way into teaching and learning, research, outreach, and the operations that support them.

Higher Education and the Adaptation of Sustainability

The majority of the universities engaged with sustainability are preoccupied with the greening of the campus. The evidence for this can be found within research papers published in journals of higher education but also across institutional webpages which document extensive sustainability efforts to minimize waste and energy consumption; develop low carbon buildings; protect biodiversity and natural space; source sustainable goods and services; and model sustainability to influence behaviours of staff, students and local communities.

Examples of good practice in campus management for sustainability have been documented in Europe and the US but also in Africa, Asia and particularly Latin America. The ISCN Sustainable Campus Excellence Awards capture and celebrates the diversity of responses to challenges in this field. Interesting examples often not celebrated through high profile awards include: the University of Hong Kong's systematic efforts to reduce environmental impact and conserve natural environments; the University Autónoma of Madrid eco-campus which creates innovative and effective opportunities for engaging staff and students in sustainability activities; Mabada Univerity in Lebanon which recycles its water and generates its own electricity (Salame 2010). Equally, the Universidad Autónoma del Estado de Morelos (UAEM) in Mexico provides an exemplary case study of how to progress campus change for sustainability through internal and external partnerships.

Education is the driving force of establishing sustainability and a systemic approach to understanding, one which goes beyond technical knowledge and even understanding the basics of a healthy ecosystem and a thriving society. According to UNESCAP (2015), "People and the nature of the society in which they live are shaped by and, in turn, shape the economies that support their livelihoods and enhance their overall quality of life. Environments provide life-giving and economically important services to economies and to people". Higher education institutions have a key role in the implementation of education for sustainability, amongst others:

- 1) project development and incorporation of sustainability principles across the disciplines;
- 2) the practice carried out by different educators can influence broader opinions through outreach activities;
- 3) an institutional culture of sustainability increases the awareness of university staff, local and broader communities;
- 4) the formation of next-generation professionals; and
- 5) implementing sustainable campus practices.

The investment in higher education is a crucial aspect in the development of a culture of sustainability including institutional framework and assessment, research, education, experiences and operations and outreach, have a substantial impact on the outside world, namely on the environment, economy, society and the stakeholder's awareness of sustainability aspects. But sustainability in higher education needs at the same time to be perceived as work in progress. As far as the levels of implementation of sustainability in university systems are concerned, institutions of higher education may be found at roughly three different stages of evolution.

In the first stage, the principles of sustainable development are not universally understood, there are no significant efforts towards promoting sustainability at university operations and no systematic projects which try to promote sustainability. In the second stage, the principles of sustainable development are widely understood and there are significant efforts towards promoting sustainability at university operations. In addition, there are various sustainability projects, as well as a programme of research and extension. While in the third stage, universities which fulfill the requirements of universities at level 2, but which are also committed to sustainability on a long-term basis and which do so by means of sustainability policies, by means of certification, the existence of various senior member of staff who oversee its sustainability efforts and the existence of sustainability projects.

These levels of stage have some degree of flexibility in the sense that universities found at stage 1 may move on to stage 2 at a given time, as long as they successfully increase their degree of engagement and commitment. Of special interest is the fact that stage 3 is only achieved by those universities which have sustainability solidly

embedded into their lives, both in terms of campus operations but also in terms of institutional philosophy, research, extension and, last but not least, in their way of thinking.

CRITICAL SUCCESS FACTORS AND CHALLENGES OF SUSTAINABILITY IN HIGHER EDUCATION

Critical success factors are a limited number to ensure the success and performance of the organization mainly for Malaysian Public Higher Institutions. The critical factors that determine the successfulness of sustainability development first come with a certain level of knowledge from the stakeholder of every higher education institution. Knowledge is recognize as one of a key competency of sustainable development in institutions along with system thinking, emotions, ethics, value and action (Mochizuki & Fadeeva, 2010). According to Awuzie & Emuze (2018) the barriers to implement sustainable facilities management in university are identified as lack of knowledge, lack of capabilities, skills, time management and authority such as lack of guidance document about sustainable development.

According to Minguet, Martinez, Agut, Palacios, Piñero, & Ull, (2011); Ahmed, Majid, Zin, Phulpoto, & Umrani, (2016) suggests introduce sustainability into university curriculum is a good basic start of sustainability-related approaches as the study reveal that education is one of the critical success factor. Other than that lack of training among educator also lead to insufficient sustainability benefit that can be offered to the student and student turnover may lead to the implication (Velazquez, Munguia, & Sanchez, 2005). Apart from training, organizational structure also identified as one of the factor as with powerful organizational structure, the sustainable development will integrate successfully with education management (Figueiró & Raufflet, 2015). Sustainability in environmental quality, social equity and economic validity can be achieved if the CSFs are properly addressed (Saleh, Mohammed, & Abdullah, 2015).

Apart from benefits, higher education institution is facing challenges as they need a contribution to sustainability. According to Saleh, Mohammed, & Abdullah (2015), the challenges of sustainable development are lack of involvement, lack of funding in managing sustainable development, and lack of policy. The challenges for sustainable future do not only focus on the ability of the higher education institution to doing so, but for the willingness and the time frame for every higher education institution in adapting sustainable future.

Velazquez, Munguia, & Sanchez (2005) reported that involvement and inspiration toward sustainability, the lack of time and availability as well as participatory approach or initiative are the potential causes of sustainability failures and successes in the university. While (Peter, Libunao, & Latif, 2016) adding that it should be the

involvement of an educator to build an initiative in using sustainability approach in research, teaching and learning activity in both formal and informal curricula. Other than that, government support and funding are also proven to increase the promotion of sustainability in academic development (Su & Chang, 2010). According to Velazquez et al., (2005), lack of funding will diminished all effort in moving towards sustainable development for higher education.

Sustainability is a multi-faceted agenda for organizations, but when harnessed effectively, its integrative potential is substantial. Yet to achieve this level of engagement in academic institutions involves profound leadership challenges. Leading change for sustainability in universities requires more than knowledge of, or commitment to, the principles of sustainability. It requires a facility for bringing about change which deals with complexity, uncertainty and multiple stakeholders, as well as ambiguous terminology. It is complex, confusing, time consuming and difficult to implement, which explains why, to date, only a handful of university leaders have taken on the challenge. Evidence suggests, that despite this inertia, there are movements towards more sustainable planning and practice in higher education.

Government incentives, socio-economic expectations, partnership platforms, student leadership and experimental practice, described in this paper, are all contributing to changes: although these may not be deep or systemic. University leaders now need to help join these dots of activity in ways which align mainstream practices to sustainability innovation in their institutions. Senior management teams, at this moment, hold the key to transforming higher education so that it can play its part in transforming social practices and contribute to more sustainable futures.

In Malaysia, considerable efforts had been applied by the government as an initiative to involve agendas of sustainable development in Malaysian higher education system. With sufficient in policy on sustainable development in higher education, the challenges in implementing sustainable development will be reduced and the beneficial advantage can be fruitful to the institution. Therefore, there is a gap in sustainable development implementation in higher education.

CONCLUSION

Sustainable development is without any doubt a major scientific field, one which combines the precision of science with the social, economic and political elements which make up society as a whole. The likelihood of success of attempts to promote sustainability at universities may greatly increase if a common vision is shared across the institution. This is important since it leads to greater mobilisation and support in the search for resources to finance individual activities.

In many cases, the implementation of the principles of sustainability in universities may include new ways of thinking. It is not sufficient to organise campus based programmes and showcase them as examples of how sustainability is dealt with. Rather, it is important to place sustainability whenever possible centrally in research and extension programmes and to translate its principles in practice by means of projects. By combining the efforts of staff and administrations, universities may be a better position to adopt but also disseminate sustainable modes of production and consumption and encourage society to recognise the important role of sustainable development as a tool towards improved quality of life.

This paper focused on three challenges which is lack of involvement, lack of funding, and lack of policy. This is because three challenges for sustainable development can be determined in order to improve the performance of higher education, particularly in Malaysian Public Higher Institutions. This research is important for helping institutions to improve higher education sustainable development in Malaysian Public Higher Institutions. Therefore, this research is focused on benefits for sustainable development such as environmental sustainability, integrated sustainability, and institutional sustainability, promote sustainability, and quality improvement in order to address sustainability issues in higher education.

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THE ROLE OF AUTOMATION ON EMPLOYMENT FUTURE IN THE UAE BANKING SECTOR

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Abstract

Today, automation become part of the banking service all over the world. The banks in the United Arab Emirates (UAE) rely on automation to enhance customer service in many ways, as well as enhance the communications with the clients and improve bank performance in the financial market. All these advancements motivate banks in the UAE to integrate automation technology into their present and future plans. Unfortunately, automation reduce the employment rate and increase the downsizing of workforce inside the banks. Based on this scenario, the aim of this study is to survey the banks in the UAE to identify how automation affected employment future and the performance of employees. The findings show that technological improvements in the banking sector through automation has attracted more clients to the banks but on contrary as the usage of automation has increased, so that the number of employees has been decreased and downsizing raised. Therefore, automation should be utilized in a way to preserve the employees of the bank and shift their role towards advanced banking tasks. The outcome of this study will provide an in-depth analysis about the reality of automation in the UAE banking sector. Hence, filling the gaps in the body knowledge with respect to the impact of automation on the future of employment in UAE's banking industry.

Keywords: Automation, Banking industry, Employee performance

INTRODUCTION

Today, automation become part of banking service all over the world. Whereas the banks of UAE are not an exemption and become increasingly depending on automation to enhance customer service, as well as receive feedbacks via automated methods to improve their performance in the financial market. At present the automation methods have accelerated post the pandemic as the customers have been relying more mobile apps for the banking and they prefer automated experiences because they have to wait less (Glover, 2021). Automation is defined as getting the work done automatically with the help of AI and machines. Moreover, automation in the banking service could be defined as the application and establishment of technologies for delivering the banking services with minimum human intervention. Implementing automation technologies in banks improves the reliability, productivity, and efficiency of the banks. The process of automation in banking sectors speeds up the tasks. It completes them in minimum time earlier, which were done by humans and were a time-consuming process. However previously there were

less usage of automated in the banks because people were not reliable on online automated processes for their financial measures. Much pressure was put forward into human tasks and human efforts that led to occurrence of errors.

The literatures reveal that the implementation of automation in the banking industry has enhanced the overall performance of banks. The first automation in the financial sector was the establishment of the Automatic Teller Machine (ATM). The establishment of ATMs in the banking industry made the withdrawal of money easy for the consumers, and it also reduced the work pressure from the employees. The use of ATMs in the banking sector reduced the long queues of customers in banks, thus reducing the stress and burden from the employees. Moreover, the establishment of ATMs in the banking industry also enhanced the customer services like ATM's work 24/7, 365 days. Thus, the use of automation in the banking sector helped them provide their customers with improved services and reduced the burden from employees, which improved employee productivity. After establishing the ATM, the banking industry has continuously looked forward to improving its performance by adopting new and advanced technologies in the banking sector. Automation in the banking sector was spreading very fast in the last decades in Middle East nations comparing to benchmark countries in the world. The technical potential in the middle east is similar to global average, with notable variation among countries as shown in Figure 1.

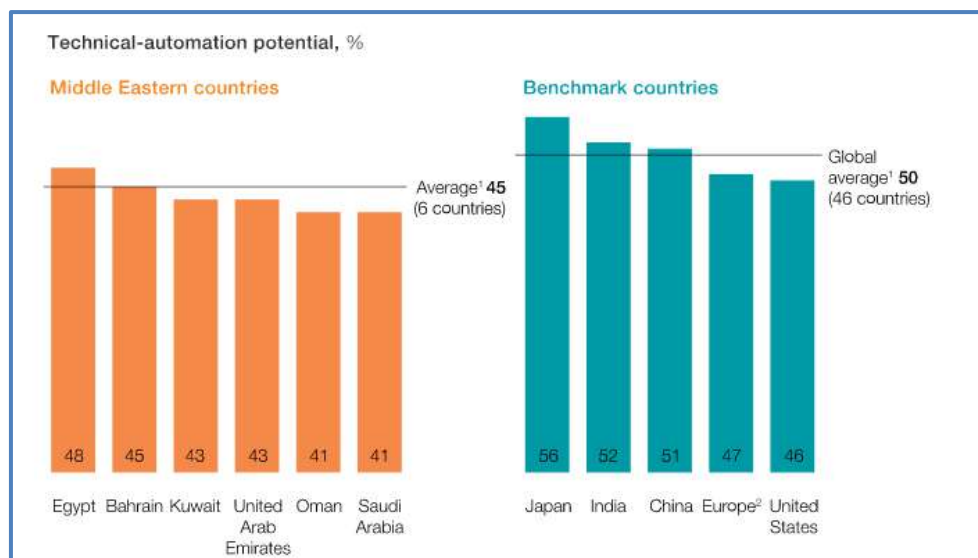


Figure 1: Automated potential in Middle East and benchmark countries

The use of automation in the banking sector not only reduces the work burden of employees but also reduces the operational expenses of the banks and provides quality services to end-users with minimum error and fraud. The banking industry has also launched e-banking and mobile banking process; this allows the customers to

have easy access to bank services. All this advancement and use of automation technology in the banking industry have improved the overall performance of the banks. Some of the studies predict that by the end of 2030 the future of automation will accelerate with 45% of the existing working methods in the Middle East. Out of the six middle Eastern countries, \$366.6 billion in wage income and 20.8 million full time employees have been examined that prefer automated services. The IT budget of NBF has increased to a compounded annual rate of 30% which explains that the operational efficiencies have increased (Moore et al., 2018).

THE AIM OF STUDY

This research will provide a detailed idea about automation in the banking sector of UAE and its impact on future employment. Despite all the advancements and the integration of automation technology to become part of the banking service have improved the overall performance of the banks, but automation reduces the employment rate and increase the downsizing the workforce inside banks and other financial institutions. In the scenario, this study will survey the banks in the UAE to identify the extent that automation has affected the employment as well as the performance of banks' staff. Moreover, this research discusses the implementation of automation in the banking sector and how it has evaluated the work performance of banks. The researcher study will provide an in-depth idea about the importance and use of automation in the banking sector. Hence going through the research will give explicit knowledge about the implementation of automation in the banking sector and its impact on the employee's productivity and future employment. The studies from the previous researches provide ideas about the automation impact on the banking sector, as well as the benefits of automation in the banking sector and how it enhances the overall performance of the bank and the employees. However, a gap remains on the studies as the articles doesn't provide idea about the impact of automation on future employment opportunities; therefore this research tries to find out the automation impact on the future employment in banking sector.

THE CHALLENGES OF AUTOMATION IN BANKS

The advancement in technology and the improved services of the banking sector by the implementation of automatic technology has increased the demand for automation. The banking sector is looking forward to implementing more AI and automation in different sectors of the bank as it enhances the overall performance of the bank and reduces operational expenses. But the challenge of implementation continues due to lots of factors such as lack of expertise and sufficient resources. Over the last few years, the use of automation has helped many banks to improve their overall performance, as the use of automation completes the work faster with minimum errors and fraud. Most of the banks throughout the world are implementing automation to improve their efficiency. However, an increase in the demand for automation has created fear and stress among the employees. More than 40%

customers across the UAE use smartphones to manage their bank accounts in 2020 and the rate is estimated to reach to 70% in upcoming 5 years. According to the analyst bank-customers would only visit their bank two-times in a year. As an outcome of this, approximately 1000 branches of some major UAE banks are closed or planning to be closed in future (Gulfnews, 2021).

Moreover, it is found that the use of automation in banks will enhance the performance of the bank and will reduce employee burden, but on the other hand, the employees are worried that an increase in the use of automation will reduce the employment opportunity and will take over jobs. This is also evidence from an article published in Forbes, reflecting that the usage of automation in banking sector like using Chatbots, AI-powered system has reduced the necessity of human labor. Chatbot adoption rate has grown from 4% to 13% in the year 2020 and banks are saving up to 30% related to customer support cost. This creates high threat of job insecurity to the employees (Forbes, 2021). This research will try to find out the impact of automation on the future employment of UAE banks.

Digitalization, according to Fuei (2017), is predicted to drastically alter the types of jobs that will be required in the future. The technique and preliminary data in Frey and Osborne's research note are used to analyze the susceptibility of jobs in Singapore to computerization and automation. They discovered that nearly a quarter of Singaporean jobs are at high risk of being computerized. As a result, the country has one of the lowest shares of high-risk jobs in the world. A considerable number of workers in this high-risk category have non-tertiary educational credentials and are older people, making them less likely to be re-employed if they lose their jobs. In brief, the banking industry throughout the world is adopting the process of automation to improve their overall work performance. Adopting automation in banking sectors has helped the banks to reduce their overall cost and improve customer satisfaction. It has also been found that with advancements in technology, the banking sector is looking forward to adopting more automation processes in the sector. On the other hand, it is being found that with an increase in the use of automation, the stress of the bank employees has increased as they think automation will take over their job. Hence this research will find out that how the process of automation will affect future employment.

AUTOMATION IN MIDDLE EAST BANKS

Automation in the banking sector is not a new phenomenon. Haralayya (2021) threw light on the concept of automation in banking sector by mentioning that, for relatively a few times, the usage of technology innovations in the banks and financial system has been a worldwide trend, with industrialized and emerging economies adopting it (Haralayya, 2021). In contemporary years, the Gulf Eastern business and insurance sector has adapted rapidly to technical advancement, which has helped bank consumers and financial provisions apply by lowering the price of operations (Bandara et al., 2019). Sophia (2018) added by saying, technological advancements in

commercial banks have enhanced local bank revenue by lowering payment processing costs and other fees (Sophia, 2018).

Ajayi (2018) stated that the UAE's financial services industry has grown to become among the biggest competition in the continent, as well as the Middle East's main financial center. 'Digital upheaval,' 'integration,' and 'digital finance' have all been thrown at the business (Ajayi, 2018). Similarly, the author Lu et al. (2020) mentioned that increased banking productivity, recruiting and maintaining consumers, enhancing statistics, launching novel solutions, and boosting customer satisfaction are all significant motivations for digitalization, in addition to the competition (Lu et al., 2020). As mentioned by Shirish, and others (2016), customers can benefit from more harmonized and modernized services if technological innovations work with the financial sector. It is a continuous procedure that delivers challenging prospects in the sector to the forefront (Shirish, Jayantilal, & Haimari, 2016). Similarly, John (2017) agreed by stating that, strong customer adaptation, as according, is the key cause for better acceptability of technology developments in the monetary industry of Middle Eastern nations given the widespread use of e-commerce, electronic commerce is used by 20% - 25% of customers (John, 2017). This is a substantial percentage given the scarcity of critical technological assets and security requirements. However, according to Dash (2017), the UAE's commercial banks is a pioneer in supporting new technology advancements, with banks like Emirates NBD, First Arab Bank, and Dubai Islamic Bank leading the way in delivering digital financing services (Dash, 2017).

IMPACT OF AUTOMATION ON THE BANKING SECTOR

As mentioned by the authors Sardana et al. (2018) Artificial Technology adaptation in the financial field has several advantages and disadvantages, on which many researchers have provided their meaningful opinions. For example, Manning (2018) in his findings stated that, AI adoption has the potential to enable and speed the digitization of all banks' procedures. As a result, there are fewer opportunities for operator error. It has the potential to lower the expense of banking activities dramatically (Manning, 2018). It can help methodically analyze client behavior patterns and provide customized solutions to meet their requirements. Artificial intelligence technologies that use deep intelligence can recognize irregularity patterns and respond to security concerns in real-time (Sardana & Singhania, 2018). In this context, findings of Yarlagadda (2018) are mentionable that says, adopting artificial knowledge in daily operations is detrimental to all banking operations. There will be no oversight if the operation is entirely automated. It is incapable of making choices under unusual scenarios. In order to create a secure robotic environment, additional security measures are required (Yarlagadda, 2018). Likewise, Meena and Parimalarani (2020) supported these findings by stating that various electronic finance consumers in the UAE nevertheless do not feel secure since some believe that perhaps the solution for electronic banking has not been adequately deployed and linked into the

institutions' security structure to guarantee flawless breaches (Meena & Parimalarani, 2020).

In the same context, Mason (2021) argued that automation, or the practice of employing computers to better the labor process, i.e., enhancing the amount and quality of work by means of computer-controlled equipment, and it is driving the present wave of technological development. Automation has had and will continue to have a variety of economic effects on different social groups, changing racial and gender disparities. Increases in automation are linked to rising labor income inequality and widening racial and gender disparities in employment. Male jobs are more likely to be affected by technological unemployment than female jobs. Within each racial group, high density male employment is more likely to be automated (and have a lower likelihood of future demand) than high density female jobs.

Suhel et al. (2020) added more by reflecting that around 39% of Emirates electronic bank users are still unsure about the safety quality of utilizing the bank's webpage and applications for the transactions. As a result, clients may be forced to quit a bank that does not prioritize protection and ease (Suhel et al., 2020). In order to address digital banking safety issues, a defined and defined method must be devised that does not interfere with or remove the conveniences it provides to consumers. The UAE adopted the most robust economy in the Gulf Region, making digital payment a must (Ugwuanyi et al., 2021). The view of Winasis et al. (2020) seems to be interesting also, as they mentioned, in the people in the UAE who are using digital transactions is raising. People who utilize online banking or e-banking have generally had a specific attitude toward it, notably in terms of interoperability, safety, complexity, and confidence, among other things. Nonetheless, it is crucial to note that the development of e-banking inside the UAE has still not resulted in the abolition of physical banking since both remain side by side (Winasis et al., 2020).

IMPACT OF AUTOMATION ON THE FUTURE OF EMPLOYMENT IN THE BANKING SECTOR

Several studies in the past showed that automation has a significant impact of the employment rate and the future of employment in the banking industry. According to, Anbalagan (2017) there are technological forces will drastically alter the future of employment, resulting in a significant decline in the conventional organization interaction. The new platforms enable commercial engagement to be arranged in methods that move much of whatever was formerly done by full-time employees within a company to a multitude of sole proprietors as well as on labor. Consequently, the industry is mainly reliant on short-term freelancing partnerships instead of job growth (Anbalagan, 2017). Furthermore, Nissim and Simon (2021) added that simultaneously, machine intelligence and mechatronics techniques are improving the perceptual and physiological tasks that make up most of today's modern work, paving the way for the automated processes of complicated human operations such as propelling a car or having to manage a proposal and interrupting a variety of

professions such as legislation, advising retail outlets, and mass transit (Nissim & Simon, 2021).

In the same domain, Carbonero et al. (2020) denoted that, in scholarly and public debates, the influence of robots on employment and commerce is a hot topic. There are particular fears that, as the labor cost advantage in emerging countries erodes, automation may pose a danger to jobs. They present data on the impact of robotics on global employment, especially emerging nations. To track the employment of robots, we created a technical advancement index, which measures a robot's ability to do various tasks. Robots are proving to have a major negative impact on global employment. While it is minor in wealthy countries, it accounts for -11 percent in emerging economies between 2005 and 2014. However, there appear to be positive spillovers from manufacturing robotization on employment outside of manufacturing.

Likewise, Katz et al. (2021) build on the literature on labor implications of technological disruptions by providing a complete assessment of recent research on the projected effects of automation on employment levels, as well as a variety of empirical methodologies to estimate the effects for an emerging economy. To demonstrate the impact, the research uses Chile as a case study to present alternative empirical methodologies for estimating job gains and losses. The empirical findings imply that the number of jobs lost to automation technology presently equals the number of jobs created, resulting in a minor overall impact on the labor force. However, the new jobs necessitate a greater number of highly educated workers. As a result, the data point to potential social exclusionary consequences, as low-skilled, low-income workers are the most vulnerable groups facing a significant chance of losing their jobs. Active public policies must be devised and executed to mitigate these effects in order to achieve possible job benefits while limiting any negative effects on vulnerable and disadvantaged groups.

Sharma and Shrivastav (2021) examined the influence of automation on the mindsets of current employees and job searchers, to determine if automation has a positive or negative impact, and to determine whether automation will constitute a threat to upcoming jobs. The initial stage of research parallels was to create a questionnaire that addressed certain aspects of the study. According to the findings of their study, existing employees are less affected by automation than job seekers (employable mass). Job seekers are primarily concerned about employment since, while automation is currently restricted, it will soon replace industries with fully automated processes, resulting in job losses.

As mentioned by Sundararajan (2017), as fewer individuals earn a livelihood in the conventional sense, and so many, though not all, individuals change jobs multiple times throughout their career, the focus of learning must evolve as well (Sundararajan, 2017). Rather than relying just on two- or multiple tertiary institutes that educate students early in their careers, as society accomplished in the twentieth

century, civilization must develop robust academic institutions which assist employees in making mid-career changes (Ortaköy & Özsürünç, 2019). Furthermore, Vijai et al. (2020) added that in a period of greater personal entrepreneurs, the mostly employer-funded element of the public security net commonly comprises health coverage, paid vacation days, employment premiums, pension contributions, plus consistent paychecks that stabilize earnings—must have reconsidered (Vijai et al., 2020).

Lima et al. (2021) investigates the influence of automation on the Brazilian labor in order to provide knowledge to decision-makers. The authors applied the probability of computerization from Frey and Osborne's landmark work to each of Brazil's more than 2,500 jobs. They then compared the likelihood of automation to socioeconomic data on individuals and businesses accessible in the Brazilian Ministry of Labor Database. In the future decades, automation is predicted to affect 60 percent of employment in Brazil, with eight of the ten occupations with the largest workforce being highly automatable. The likelihood of workers becoming automated diminishes as their education level rises, with the greatest disparity between those with a higher education and those without. Other discrepancies in the impact of automation are revealed by the findings: the higher the income, the lower the possibility of vocations being automated; the larger the organization, the lower the automation index; and workers aged 16 to 24 have significantly higher risks of being automated.

THE IMPACT OF AUTOMATION ON EMPLOYEES' PERFORMANCE

Automation has brought tremendous advantages to the banking service, but it is also affecting the workforce in this financial market. The precious studies show that how the implementation of automation in banking sector has reduced the work pressure from the employees. While discussing about physiological impact of automation on employees in the banking sector, the downsizing is another consequence of adopting automation in banking service. As per a report published by Wells Fargo, digitalization would result in the elimination of 200,000 bank employment over the next ten years because of automation. Anybody who works in or wants to join the sector should be concerned when they hear such horrific statistics. People frequently link the effects of robotics with blue-collar occupations, but they may miss its effect on white-collar jobs (Malali & Gopalakrishnan, 2020). To place this in context, 200k employment account for 13.3 per cent of the 1.5 m occupations expected to be sacrificed in the United States over the same time frame (Oxford Economics, 2019). The risk of automated technologies displacing present UAE employees with poor to moderate educational levels and skill is the greatest. The average technological mechanization potential for employees with a secondary school diploma or considerable relevant expertise is 55 per cent, compared to 50 per cent for those with lesser than a basic school diploma (Moore et al., 2018).

In this regard, Vermeulen and Kesselhu (2018) investigate the influence of automation on employment during the next decade, both at a global level and in

specific (types of) industries. To this end, they combined a multisectoral structural change evolutionary economic model with labor economic theory. They gain a complete understanding of how labor displacement in application sectors is balanced by intra- and intersectoral countervailing effects, and particularly scooped up by newly established, labor-intensive sectors. To specify where and how industries and occupations risk employment disruptions, we leverage various trustworthy datasets with expert estimates on employment in occupations affected by automation (and particularly by the advent of robotics and AI). Likewise, Zorob (2008) examined the effect of automation in improving the performance of personnel affairs administrations in Gaza's government ministries. The researcher used a descriptive analytical technique by conducting an all-encompassing survey of managers, vice presidents, and heads of departments who undertake various missions and activities related to people issues in government ministries. The findings of Zorob's study revealed that automation aids in the planning, selection, evaluation, and identification of human resource training needs in government ministries; In addition, they concluded the difficulties and roadblocks that may arise when automating personnel administrations. Finally, Anagnoste (2021) suggested that enterprises are transferring their workloads to software robots by using automation on the cloud, on-premise, or hybrid, changing existing operating models, reducing labor work. As the rate of technology progress accelerates and digitization pervades all jobs and industries, technical job-specific skills may fast become obsolete.

CONCLUSION

The banking industry around the world is embracing automation to boost overall work performance. Adoption of automation in the banking sector has assisted banks in lowering overall costs and improving client satisfaction. It has also been discovered that with technological improvements, the banking sector is looking forward to embracing more automated procedures in the sector. On the other side, it has been discovered that as the usage of automation has increased, so has the tension of bank employees, who fear that automation will take away their jobs. As a result, the purpose of this study is to understand how the process of automation will affect future employment in UAE banking sector. In conclusion, while automation and digitalization on the workplace is likely to grow even more, automation is unlikely to cause a big shift in employment in the near future, government policy might support automation while also preparing the workers for the change to preserve their jobs by developing more skills in the banking tasks. Automation could be utilized to generate job growth by using other skills of employees in the coming years so that automation is likely to continue to create more jobs than it terminates, and occupational role change and job relocation both within and between sectors will accelerate.\

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TRENDS IN PUBLIC BUDGETING REFORM: INTEGRATION OF ZERO-BASED BUDGETING AND CLOUD-BASED SOFTWARE AS A SERVICE INITIATIVES FRO FUTURE RESEARCH AGENDA

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Abstract

This study aims to analyze the most important bibliometric indicators and articles on public budgeting reform (PBR) in general and zero-based budgeting (ZBB) and cloud-based software as a service (SAAS) initiatives that have been published in Scopus-indexed journals from the year 1976 until 2022. The analysis includes the categories of publication journals, attributes or words, years of publication, and topics covered. The bibliometric and content analysis of the publications focused on the Scopus database. Only English articles were considered. The co-occurrence of keywords and countries were visualized by mapping and network analysis using RStudio and VOSviewer. The analysis covered 470 articles on public budget reform, zero-based budgeting (ZBB), and cloud-based software as a service across a period of 40 years. Three journals that produced the most articles on public budget reform, zero-based budgeting (ZBB), and cloud-based software as a service were Accounting (n = 407), Management and Accounting (n = 21), and IEEE Transactions on Services Computing (n = 7). The terms used in public budget reform research included "public budget reform," "cost control," "efficiency," "anti-corruption," "integrity," "accounting and information," "transparency," "performance budgeting," and "accountability,". Meanwhile, the terms used in research on zero-based budgeting include "zero-based budgeting," "allocation efficiency," "cost-benefit analysis", "prioritization," "cutting-edge technology," "transparency," "justification," and "accountability". Lastly, the terms used in research on cloud software as a service include "cloud software as a service," "cost-effective access," "real-time reporting," "e-budgeting," "transparency," and "accountability. The analysis showed there was an increasing trend of publications from 1976 to 2022.

Keywords: Public budgeting reform, zero-based budgeting, cloud software as a service, bibliometric, RStudio, VOSviewer.

INTRODUCTION

This paper explores the debate on public budgeting reform, zero-based budgeting, and cloud computing as a service over the previous four decades (1976-2022). Discourse comprehension can be facilitated with bibliometric analysis from the use of frameworks and techniques to examine citations in scientific publications (Donthu et

al.,2021; Moral-muñoz et al.,2020; (Ellegaard & Wallin (2015); Patra et al., 2006; Saravanan & Dominic,2014), Bibliometric analysis uses a number of indicators to evaluate the intellectual influence of a specific field of study and to obtain insight into the intellectual structure of a broad academic discipline.

While there have been numerous articles on public budgeting reform, zero-based budgeting, and cloud computing as a service, none has used bibliometric analysis and social network analysis to examine the articles published on those topics. This article, therefore, aims to assess the publication trends about the three subjects. Specifically, this paper conducted a keyword co-occurrence analysis using RStudio and VOSviewer. Furthermore, this study analyzed the bibliographic characteristics and trends of articles on public budgeting reform, zero-based budgeting, and cloud computing as a service published in Scopus-indexed journals between 1976 and 2022. The study design is shown in the following figure.

STUDY DESIGN

To illustrate the current condition of the intellectual structure and growing trends of a public budgeting reform, zero-based budgeting, and cloud computing as a service, bibliometric analysis methodologies fall into two categories: (1) performance analysis and (2) scientific mapping. performance analysis is common practice in to present the performance of various research constituents such as authors, institutions, countries, and journals in the field, whereas science mapping primarily focuses on the connections between research constituents (Donthu et al., 2021). The methods for performance analysis and science mapping, which are depicted in Figure 1, are discussed in more detail in the following subsections.

METHODOLOGY

This study used descriptive and bibliometric analysis, collecting data from the Scopus database. To obtain meaningful results of the trends on the specific topics being researched, the keywords used in the query are crucial. As for this study, the keywords for the title, abstract, and author search function were "public budget reform", "zero-based budgeting", "cloud software as a service", and other relevant terms. The next stage was downloading the 470 articles, which had been chosen for

their relevancy, from the Scopus database and analyzing them. BibTeX and CSV files were downloaded according to the bibliometric software used.

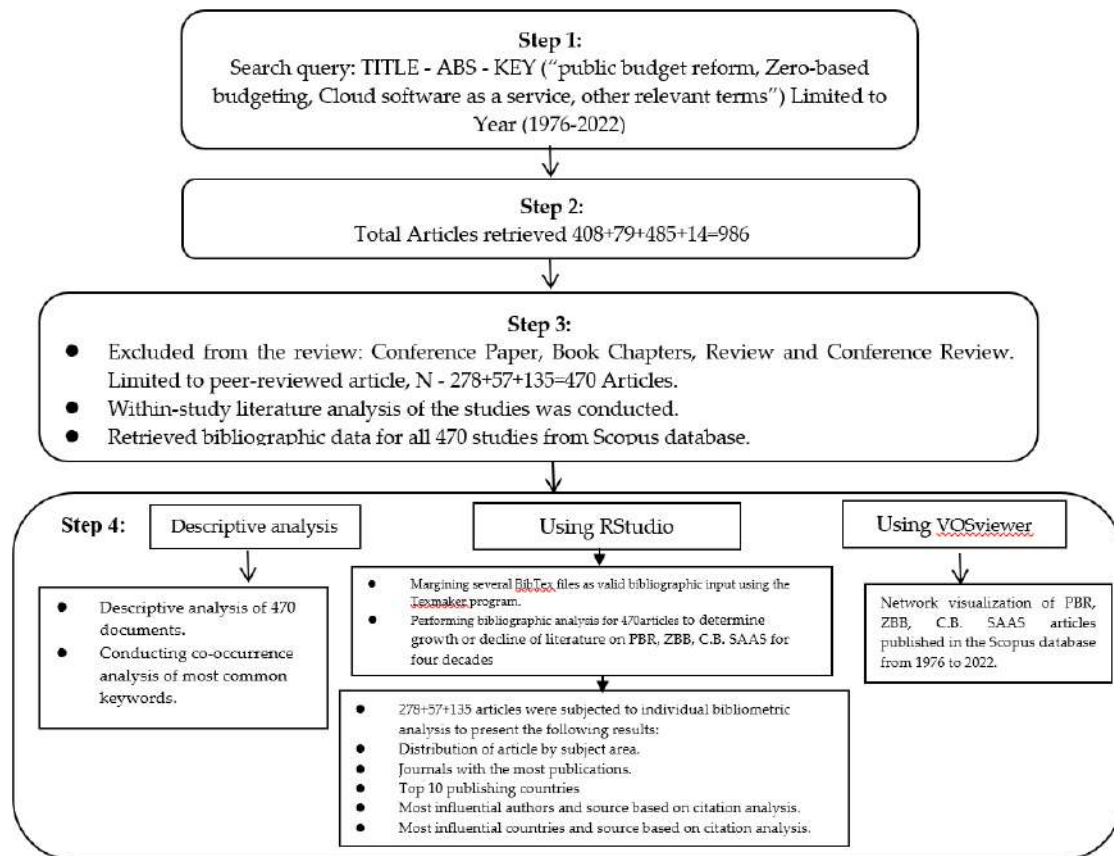


Figure 1: Design of the Study

In ensuring consistency with regards to keywords that occasionally appeared in the singular or plural, abbreviations, or other forms, the data were also standardized. RStudio and VOSviewer were used to analyze the collected data. Additionally, the search was restricted to include only publications from the previous 40 years (1976–2022).

The analysis identified 470 articles in this phase. The topics covered under public budget reform are cost control, budget efficiency, program’s effectiveness, anti-corruption, financial integrity, allocation efficiency, accounting and information management reporting, fiscal transparency, performance budgeting, shifting the emphasis from inputs to outputs and outcomes, strengthening accountability, enforcing aggregate fiscal discipline, and new budgeting techniques. The topics discussed under zero-based budgeting include improving output-oriented budgeting systems, performance-driven, justifying all expenses, optimizing costs, promoting

cost-benefit analysis, prioritizing resource allocation efficiency, strengthening strategic growth, encouraging management to run operations effectively, and improving transparency and rationalization. Real-time reporting, increased stakeholder transparency and engagement, cost-effective access, actionable information for data-driven decision-making, user-friendly, collaborative features, eliminating Excel spreadsheets from the budgeting process, and integrated budgeting best practices are some of the topics covered in the discourse on cloud software as a service.

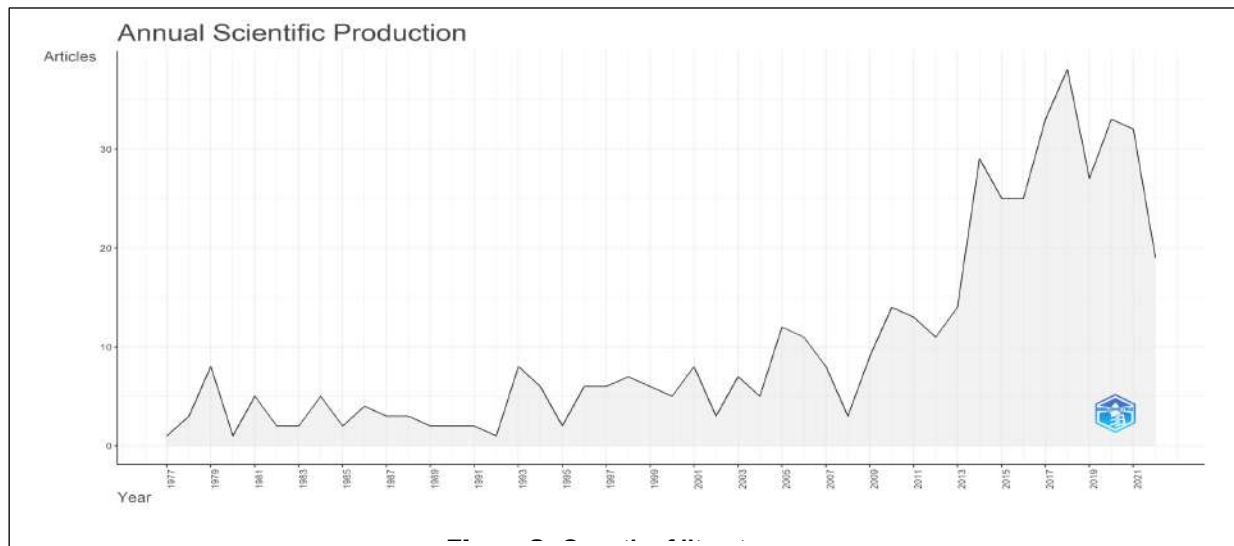
The terms used in public budget reform research included "public budget reform," "cost control," "efficiency," "effectiveness," "anti-corruption," "integrity," "accounting and information," "transparency," "performance budgeting," "output and outcomes," "accountability," "discipline," and "analysis", while the terms rarely used in the study were accrual accounting and decentralized fiscal system.

The terms "zero-based budgeting," "optimizing costs," "allocation efficiency," "cost-benefit analysis", "prioritization," "cutting-edge technology," "transparency," "justification," "accountability," and "analysis" were frequently used in zero-based budgeting research.

In cloud software as service research, the phrases "cloud software as a service," "cost-effective access," "real-time reporting," "cutting-edge technology," "E-Budgeting," "Smart Budgeting," "transparency," "accountability," and "analysis" were frequently used.

RESULTS

The least number of publications on public budget reform was recorded in 1980, while the highest number was in 2020. Research on zero-based budgeting was the lowest in 2000, while the highest was in 2021. Finally, 2010 saw the least number of publications on cloud software as a service, while 2018 saw the highest number. Figure 2 shows the publication trend using the keywords "public budget reform", "zero-based budgeting", and "cloud software as a service".



The query “public budget reform” returned 278 documents. The articles were mainly distributed in the fields of social sciences (38.4%), business, management and accounting (26.2%), economics and finance (15.7%), medicine (7.4%), and environmental science (4%). Figure 3 shows the distribution of public budget reform articles across the top eleven subject areas.

The query “zero-based budgeting” returned 57 documents. The articles were mainly distributed in the fields of business, management and accounting (22.1%), social sciences (22.1%), medicine (17.4), nursing (9.3), and decision sciences (5.8). Figure 4 shows the distribution of zero-based budgeting articles across the top eleven subject areas.

The query “cloud-based software as a service” returned 135 documents. The articles were mainly distributed in the fields of computer science (39%), engineering (15.4%), business, management and accounting (9.1%), decision sciences (8.7%), and mathematics (7.1%). Figure 5 shows the distribution of cloud software as a service (SAAS) articles across the top eleven subject areas.

Analysis using RStudio showed that the public budgeting reform articles were published in 153 different journals. The articles were mostly published in Public Budgeting and Finance (n = 14), followed by International Journal of Public Administration and Public Administration Review (n = 13), Public Money and Management (n = 12), Public Administration and Development (n =9), and International Journal of Public Sector Management (n = 9). Table 1 shows the journals with the most publications on the subject.

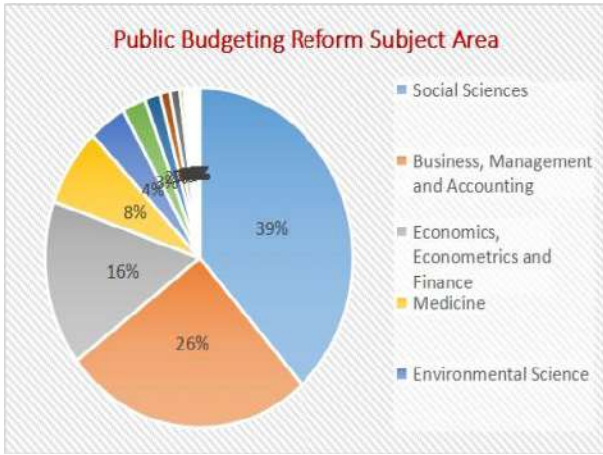


Figure 3: Distribution of PBR Articles by Subject Area



Figure 4: Distribution of ZBB Articles by Subject Area

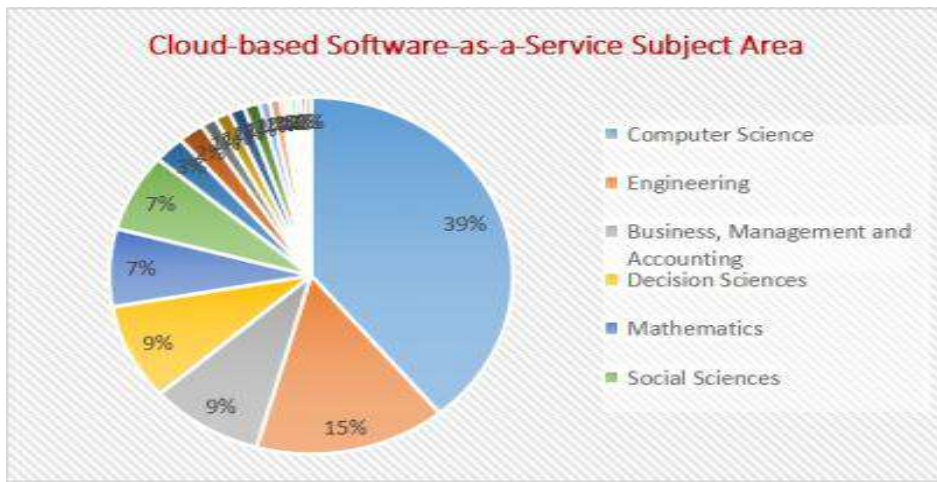
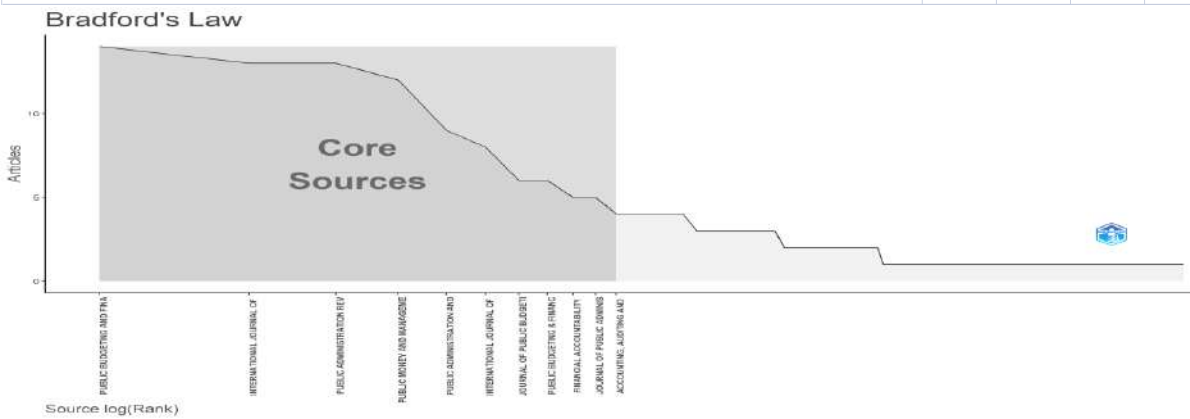


Figure 5: Distribution of C.B. SAAS Articles by Subject Area

Table 1: Journals with Most Publications on Public Budgeting Reform

SO	Rank	Freq	cumFreq	Zone
PUBLIC BUDGETING AND FINANCE	1	14	14	Zone 1
INTERNATIONAL JOURNAL OF PUBLIC ADMINISTRATION	2	13	27	Zone 1
PUBLIC ADMINISTRATION REVIEW	3	13	40	Zone 1
PUBLIC MONEY AND MANAGEMENT	4	12	52	Zone 1
PUBLIC ADMINISTRATION AND DEVELOPMENT	5	9	61	Zone 1



Analysis using RStudio showed that the zero-based budgeting articles were published in 54 different journals. The articles were mostly published in Abstracts of Health Care Management Studies (n = 2) and Bottom Line and Hospital Financial Management Journal (n = 2), while Abacus and other 50 journals published one article each. Table 2 shows the journals with the most publications on the subject.

Table 2: Journals with Most Publications on Zero-based Budgeting

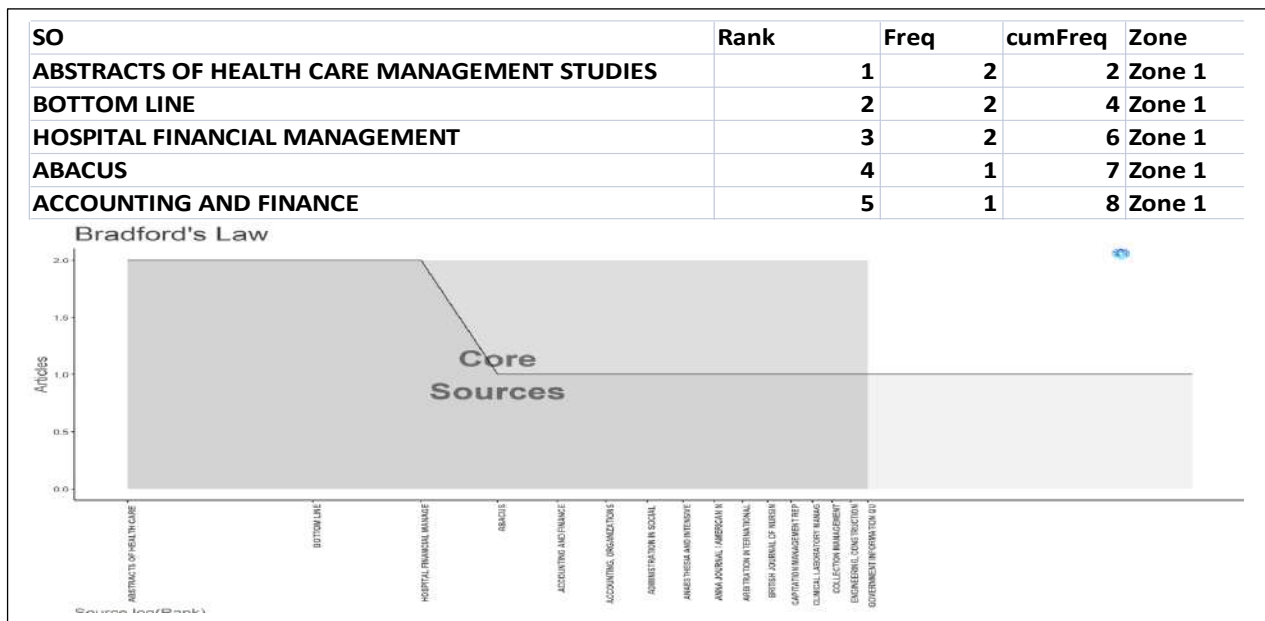
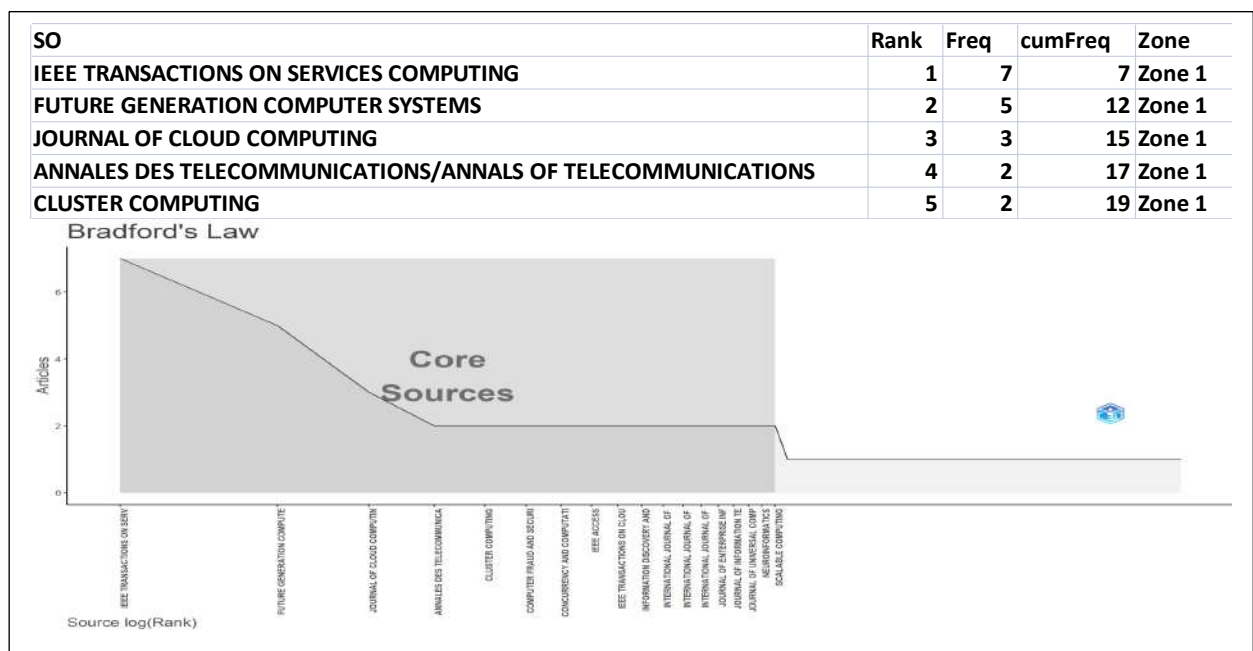


Table 3: Journals with Most Publications on Cloud Software as a Service



Analysis using RStudio showed that the cloud software as a services articles were published in 108 different journals. The articles were mostly published in IEEE Transactions on Services Computing (n = 7), followed by Future Generation Computer Systems (n = 5), Journal of Cloud Computing (n = 3), Annales Des Telecommunications (n = 2), and Cluster Computing (n = 2). Table 3 shows the journals with the most publications on the subject.

Throughout the review period of 1976–2022, the United States produced the most publications on public budget reform (n = 77), zero-based budgeting (n = 27), and cloud-based software as a service (n = 34). The United Kingdom was the second most productive country for research on public budget reform (n = 28) and zero-based budgeting (n = 4) was United Kingdom, while India was ranked second for cloud-based software as a service (n = 21). Figure 5–7 ranks the 10 most productive countries for the three subjects.



Figure 5: Ten Most Productive Countries in Public Budget Reform Research

Figure 6: Ten Most Productive Countries in Zero-based Budgeting Research

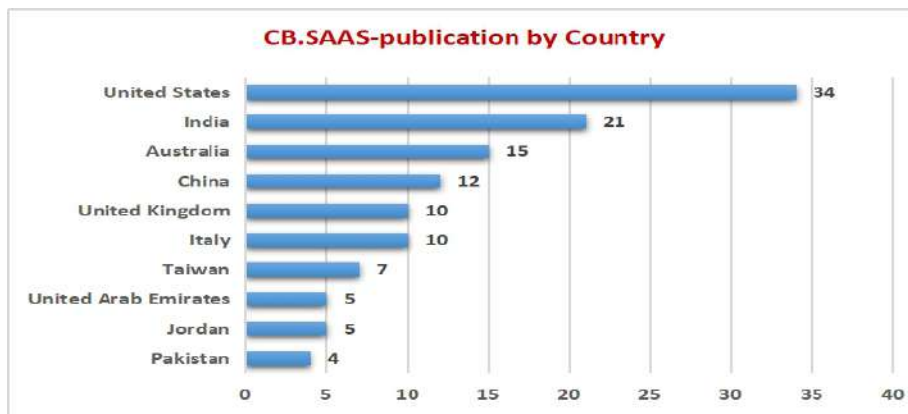


Figure 7: Ten Most Productive Countries in Cloud-based Software as a Service Research

Table 4 lists the most influential authors in public budgeting reform, as measured by the number of citations in the Scopus database. The most influential authors were Kasdin (2016) (n = 9 citations). Tying in second place were Feyzabadi et al (2013) (n = 8), and Doshmangir (2021) (n = 6) ranked third.

Table 4: Most Influential Authors in Public Budgeting Reform

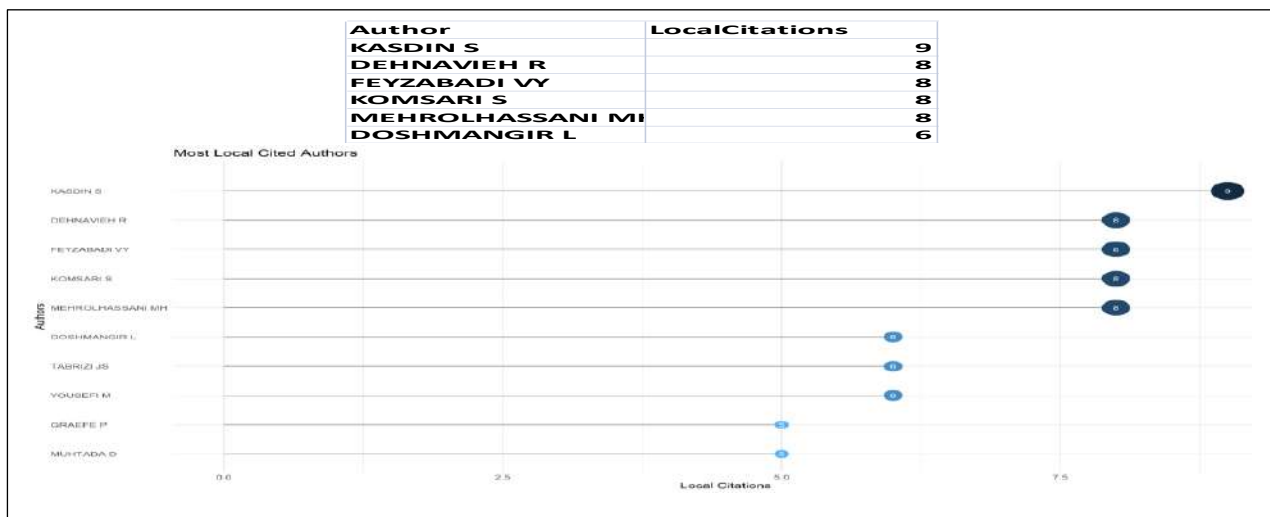


Table 5 lists the most influential authors in zero-based budgeting, as measured by the number of citations in the Scopus database. Tying in first place were Dickson Gw (1970), Linn (2007), and Wetherbe (1981), each with two citations, followed by Flamholtz (1980) with one citation.

Table 5: Most Influential Authors in Zero-based Budgeting

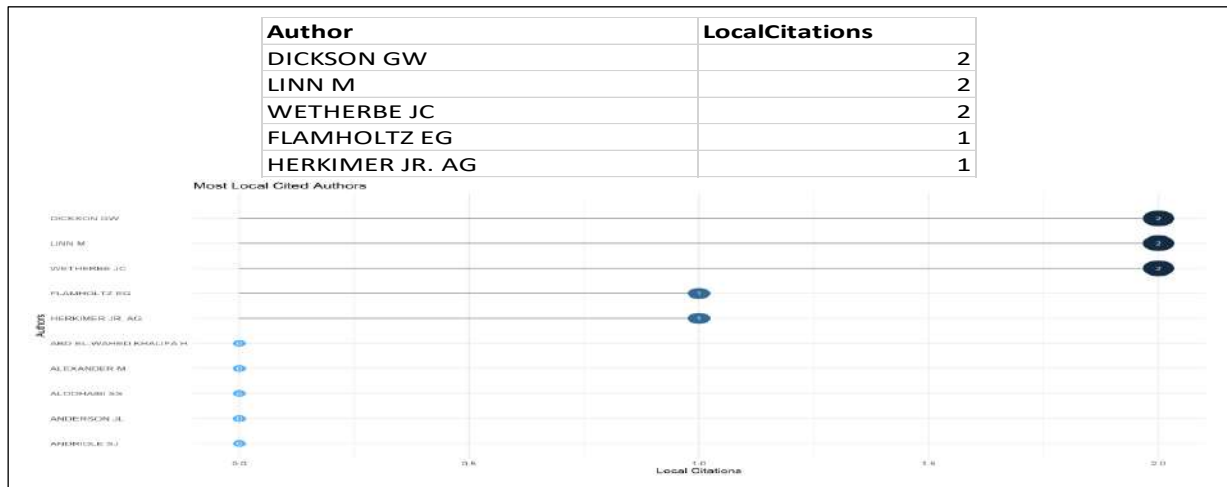


Table 6 lists the most influential authors in cloud-based software as a service, as measured by the number of citations in the Scopus database. The most influential authors were Ahmad et al., (2022), followed by Adamko (2017) with one citation.

Table 6: Most Influential Authors in Cloud-based Software as a Service

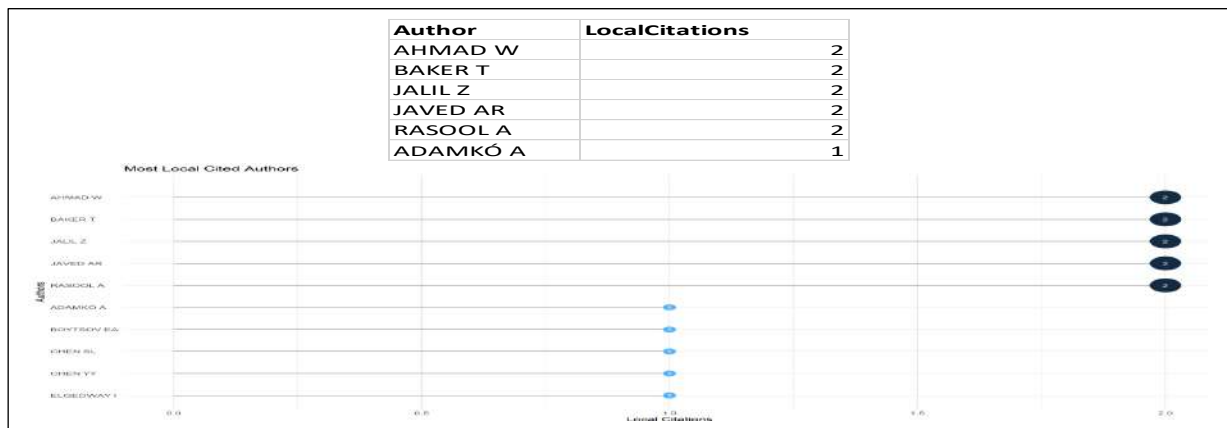


Table 7 presents the most influential journals for public budgeting reform, based on citations recorded in the Scopus database. The most productive journal was Accounting (n = 407), followed by Public Administration Review (n = 299), Management Accounting Research (n =174), Public Administration (n =131), and Financial Accountability & Management (n = 119).

Table 7: Most Influential Journals in Public Budgeting Reform

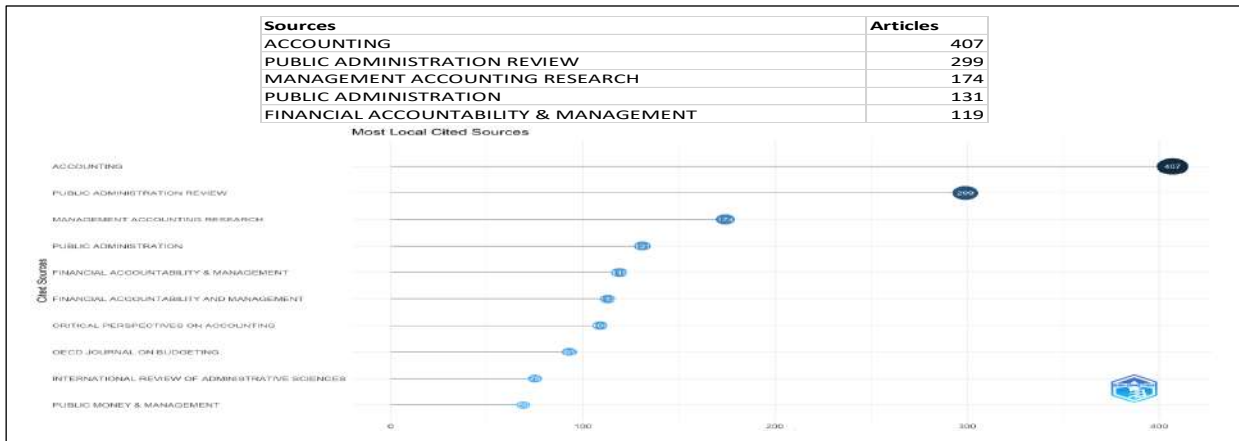


Table 8 presents the most influential journals for zero-based budgeting, based on citations recorded in the Scopus database. Accounting (n = 27) was once more the most influential journal, followed by Management Accounting Research and Public Administration Review (n = 21), Long Range Planning (n = 9), and European Accounting Review (n = 8).

Table 8: Most Influential Journals in Zero-based Budgeting

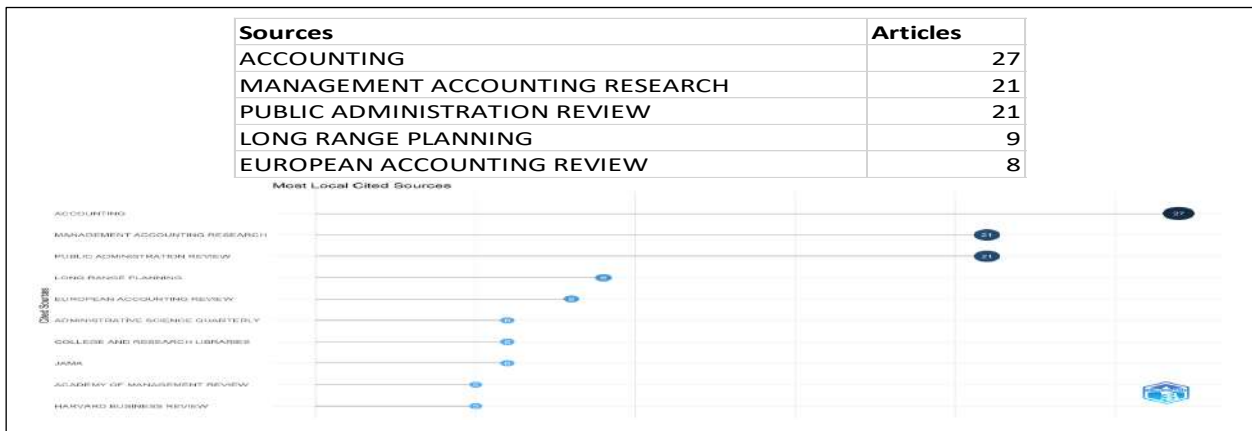
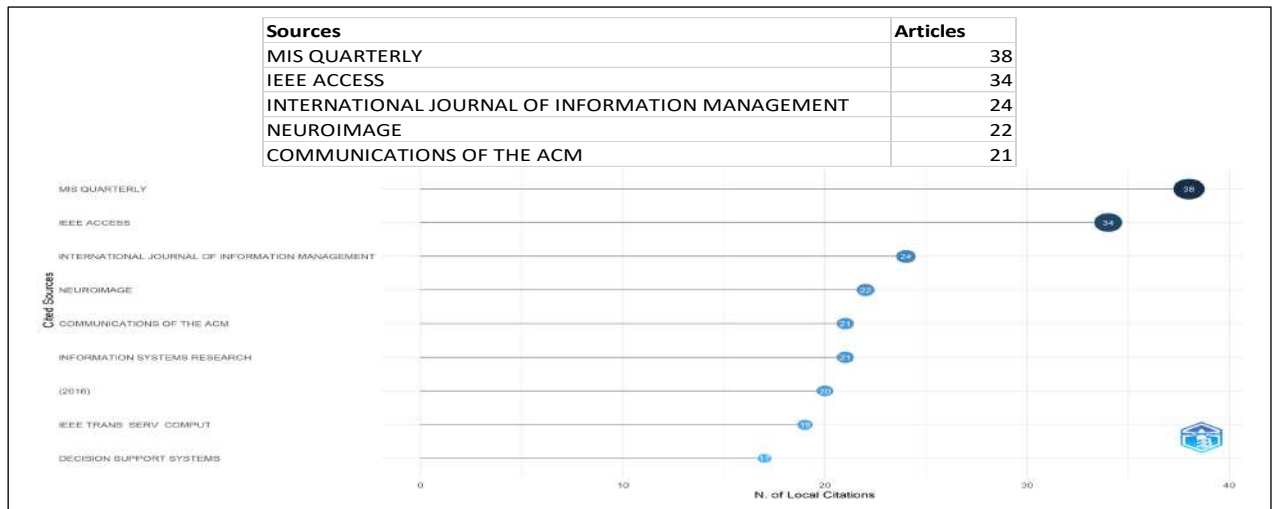


Table 9 presents the most influential journals for cloud-based software as a service, based on citations recorded in the Scopus database. Mis Quarterly (n = 38) was the most influential journal, followed by IEEE Access (n = 34), International Journal of Information Management (n = 24), Neuroimage (n = 22), and Communications of the ACM (n = 21).

Table 9: Most Influential Journals in Cloud-based Software as a Service



The RStudio results also showed the growth of research on some established themes, such as accountability, equity, and zero-based budgeting research, as well as on more recent ones, such as software as a service. Budget transparency, zero-based planning, cutting-edge technology like cloud computing, public sector accounting rather than mis-budgeting, and budgetary controlling have all received more attention in recent public budgeting reform research. Figure 8 shows the emerging research subjects in public budgeting reform.

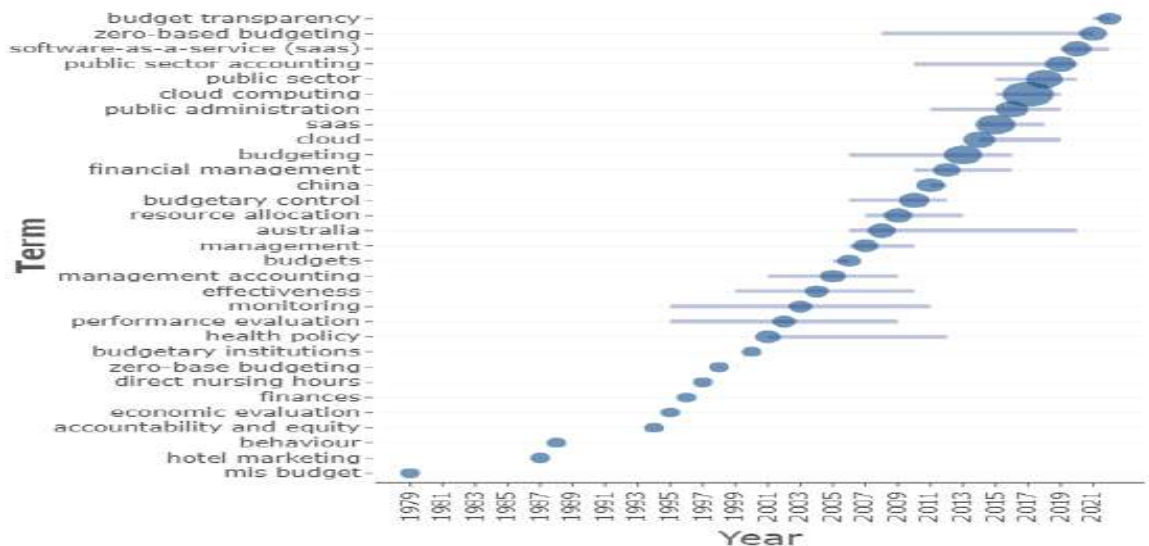


Figure 8: Emerging Research Subjects in Public Budgeting Reform

A content analysis of 278 publications on public budgeting reform, sorted by relevance, was performed. Next, the study performed a co-occurrence analysis with VOSviewer, using the “all keyword” analysis unit and the “full counting” method. The study limited the keyword occurrence to 154 out of 1077 keywords that met the threshold. The results of this analysis are presented in Figure 9.

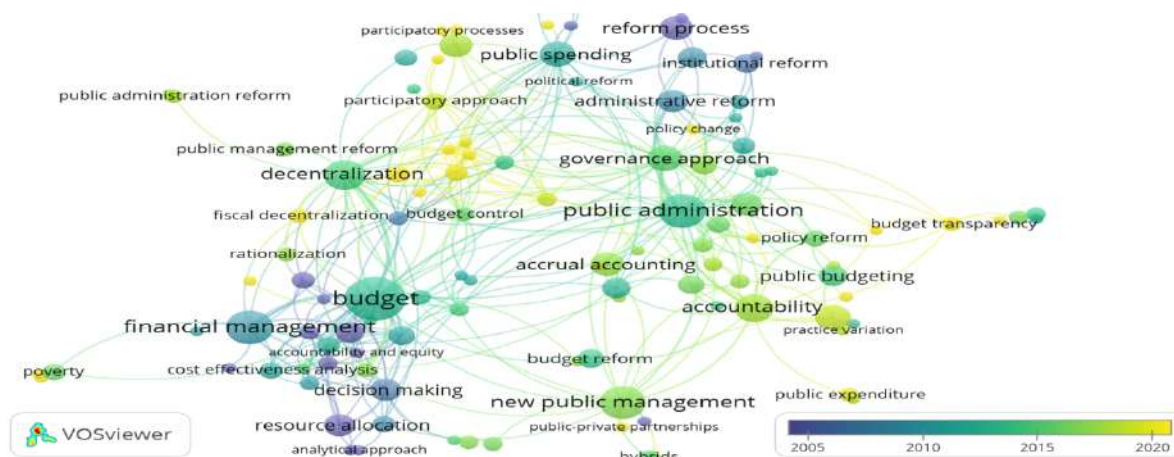


Figure 9: Overlay Visualization of Public Budget Reform Articles Published in the Scopus Database from 1976 to 2022

Figure 9 shows the emerging and latest topics covered by public budget reform research during the last four decades, divided into four clusters, each with a different number of keywords and color. The first cluster (14 items) comprised: accountability, equity, budgeting procedures, cost benefit analysis, cost control, cost effectiveness, effectiveness, efficiency, financial management, optimization, productivity, quality improvement, and trends. The second cluster (13 items) included: administrative reform, corruption, fiscal reform, governance approach, informal bureaucracy, performance information, policy change, public administration, public financial management, public procurement reform, regulatory framework, and structural change. The third cluster (10 items) comprised: accrual budgeting, autonomy, budget transparency, innovation, multi-year budgeting, open budget, performance budgeting, policy reform, public accountability, and quality of public finance. The fourth cluster (7 items) included: accounting reforms, decision making, financial crisis, health priorities, planning priority setting, rationalization, and structural reforms. A content analysis of 57 zero-based budgeting publications, sorted by relevance, was performed. Next, the study performed a co-occurrence analysis with VOSviewer, using the “all keyword” analysis unit and the “full counting” method. The study

limited the keyword occurrence to 41 out of 247 keywords that met the threshold. The results of this analysis are presented in Figure 10.

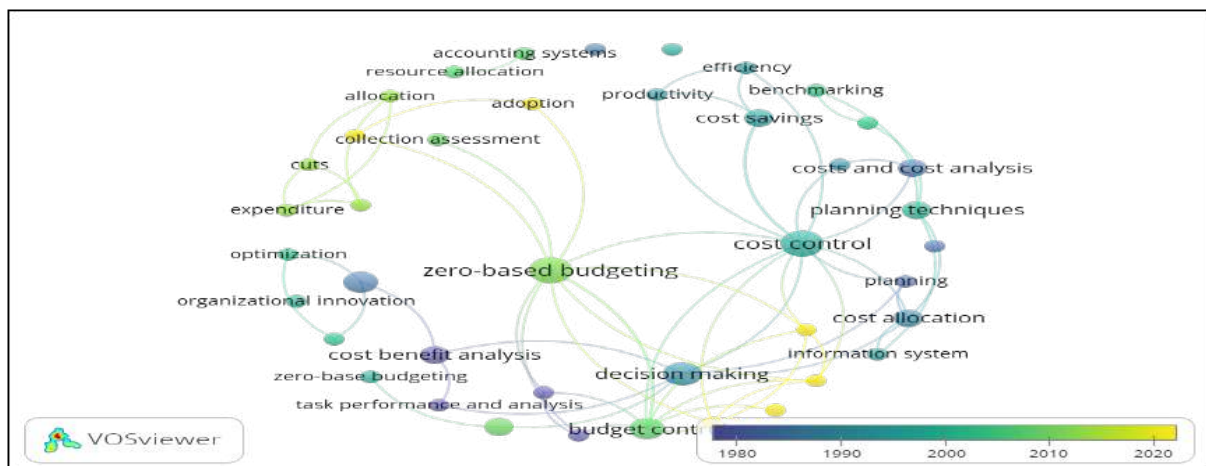


Figure 10: Overlay Visualization of Zero-based Budgeting Articles Published in the Scopus Database from 1976 to 2022

Figure 10 demonstrates emerging and current issues covered by zero-based budgeting research within the last four decades, divided into five clusters, each with a different number of keywords and color. The first cluster (6 items) included benchmark cost allocation, information system, planning, planning techniques, and quality control. The second cluster (6 items) included cost benefit analysis, cost effectiveness analysis, decision making, government, optimization, task performance, and analysis. The third cluster (6 items) comprised cost control, cost savings, costs and cost analysis, efficiency, productivity, and utilization review. The fourth cluster (4 items) included allocation, cuts, expenditure, and justification. The fiftieth cluster (4 items) included budget control, computer applications, adoption, and collection assessment.

A content analysis of 135 cloud software as a service article, sorted by relevance, was performed. Next, we performed a co-occurrence analysis with the VOSviewer, using the “all keyword” analysis unit and the “full counting” method. The study limited the keyword occurrence to 101 out of 1750 keywords that met the threshold. The results of this analysis are presented in Figure 11.

There are some common themes between zero-based budgeting, cloud software as a service, and public budgeting reform, such as their contributions to improving the government's budgeting system effectiveness, transparency, accountability, real-time reporting, increased stakeholder engagement, cost-effective access, and actionable information for data-driven decision making. However, throughout the past 40 years, little attention has been given to investigate the connection and integration between public budgeting reform, zero-based budgeting, and cloud software as a service globally.

The results showed that the United States was the most productive and influential country in terms of publications on public budgeting reform and zero-based budgeting, followed by the United Kingdom, Australia, and the United Arab Emirates. The United States was likewise the most productive in cloud software as service research, followed by India. The current analysis was limited because the study only included articles from the Scopus database and not any other sources, like Web of Science or PubMed Central.

Finally, other measures in RStudio and VOSviewer, for example co-citation or co-authorship, were not used in the study. To present a more comprehensive picture of public budgeting reforms initiatives, further bibliometric research on this subject should include other databases and subject areas and carry out richer analysis.

CONCLUSION

In summary, this paper has shown how bibliometric analysis as a scientific tool can be helpful for both experienced and new scholars who intend to explore the rich and varied themes in public budgeting reform research. Global research on public budget reform in general, and zero-based budgeting and cloud software as a service, has significantly increased during the past four decades. Technological initiatives have gained increased attention in public budget reform, according to the current and future relationships between cloud software as a service and zero-based budgeting. They are considered as an effective tool for strengthening institutions. Ensuring the rights of the citizenry to participate and monitor increasing public budgeting transparency and managing the linkages between the budget and the reform may all be achieved by integrating modern budgeting methodologies with cutting-edge technology. Furthermore, there are great opportunities to advance discussion on cloud software as a service integration with zero-based budgeting as administrative and technological innovation. Such discourse may take place in social science journals

that are concerned with fostering public budget reforms for the enhancement of public financial management.

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SAIS 2022

This e-proceeding aims to publish and highlight the articles written by academicians and researchers that are reviewed by experience scholars in the subjects of all across the theme selected by this year's International Seminar on Islam and Science 2022 (SAIS 2022). This SAIS 2022 conference theme is aligned with Universiti Sains Islam Malaysia (USIM) inspiration and focus on the integration of Naqli and 'Aqli knowledge. The 5th SAIS 2022 conference theme is Memimpin Integrasi Ilmu Naqli dan Aqli. We hope for a productive discussion among academicians across expertise, as well as flattening of the COVID-19 cases curve and proposing solutions on overcoming its problems in the areas of Science and Technology, Medicine and Health Sciences, Dentistry, Architecture & Engineering fields as well as other fields such as Shariah & Law, Quranic and Sunnah, Leadership and Management, Major Language, Economy, Muamalat, Civilisation and Thoughts. What is unique with this e-proceeding is the articles published integrate between acquired (Naqli) and revealed knowledge ('Aqli). It is also crucial for us to move and lead towards the Industrial Revolution of 4.0 Era (4IR), together with being well-equipped with relevant technologies during and post the pandemic era with our embedded culture and religion.



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