TEACHING ARABIC IN MALAYSIA USING HIGHER EDUCATION 4.0 TECHNOLOGIES

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Abstract: The Arabic language is a popular third language course at Malaysian universities, especially for the majority Malay-Muslim students. Because of their familiarity with the Islamic faith, they prefer this language as a third language, and also as a means to improve their religious piety by deepening their understanding of Islam through the Al-Qur'an. Nonetheless, the teaching and learning of Arabic seems to depend largely on the conventional 'chalk and talk' system, accompanied by constant vocabulary drills and memorisation process, relative to the English language and indeed other third languages. Given that 'Generation Z' (young people born between 1995 to 2015) and 'Generation Alpha' (children born between 2011 and 2025) are digital residents who are familiar with, and prefer to be educated by, technology, this is a serious concern. Based on data gathered from a mass online survey involving nearly 250 respondents, this study explores the above issue. Both Likert-scale closed statements and open questions were included in the survey questionnaire that sought the thoughts and expectations of respondents about Arabic language teaching in the Higher Education 4.0 era using state-of-the-art educational technology apps and tools.

Keywords: Arabic language, education 4.0, education technology, language education, Malaysia

1. Introduction

Arabic is the most extensively spoken Semitic language that has a rich cultural and literary heritage. Historians have categorized the Arabic language into two subtypes. First, Southern Arabic or Arab Qahtaniyyah (قحطانية) and the second one is Northern Arabic or Arab Adnaniyyah (عدنانية). Southern Arabic people were more civilized compared to the north because they had their own script and law. But the northern people also had their own rules, and their language was categorized as a higher standard language which is Qur'anic language. After the downfall of the Ma'rib empire in the southern states, traders in the Arabian Peninsula moved to the north. Then the southern language starts to diminish when the city of Mecca in the north started to develop and became the religious centre of Islam. The arrival of Islam and the revelation of the Al-Qur'an made Northern Arabic more recognized (Omar, Ali, Salleh & Abdullah, 2017).

According to Ryding (2005), a Western philologist, the growth of Arabic can be split into five stages. First, Old or Proto-Arabic. This stage happened approximately between the 7th century BC to 3rd century AD but the evidence and information from this period are very limited. This was followed by the Early Arabic stage. The second stage happened after the 3rd century AD, and during this time there were some changes to the Arabic Language due to surrounding cultures and it started to evolve into a closer semblance of Classical Arabic. Classical Arabic, the third stage, is the most important period in the development of Arabic and it happened during 6th century AD. People during this time loved to recite poems and this became a tradition for each tribe. The emergence of Islam happened during this period in the 7th century AD. Arabic was considered as the liturgical language of Islam because Holy Qur'an was revealed by Allah to his messenger in Arabic as stated in the Qur'an in Surah Yusuf. The fourth period was Middle Arabic. This was when the Arabic Islamic empire's influence started to diminish as during this time there were many invasions from outsiders during the 13th century. The last stage is Modern Arabic. This period was also known as the revival period of Arabic language. It began near the closing of the 18th century and its literary heritage was obviously different from the Classical Arabic period. Arabic was declared as a pluricentric language during this revival period and it became the official language Arab states post-World War II (Aboelezz, 2015).

2.   Review of Relevant Research Literature

It is estimated that 400+ million people globally speak Arabic, making it the fifth most spoken language. It is also the national language of the majority of Arab countries (UNESCO, 2017). Arabic is becoming more widespread because of economic reasons, tourism activities, education and sociopolitics (see Mat Teh, Firdaus & Nasir, 2019). Apart from English and other major languages, Arabic was accepted as an official United Nations language starting from year 1973. In addition, the 18th of December every year is the yearly 'World Arabic Day' (UNESCO, 2017).

2.1   *Arabic language education around the world*

Currently Arabic language is in the stage of 'awakening' where people around the globe start to realize the importance of learning Arabic. The United Arab Emirates (UAE) is an example of an Arab state that is progressively working to generate and support Arabic language programs from year 2012. The main objectives of these initiatives are to preserve the language, to modernize its pedagogical principles, and to prove that those initiatives are effective. Among those initiatives include The Arabic Language Charter, Arabic for Life Report, BilArabi Initiative, Arabic Reading Challenge, Reading Law, Faseeha Directive, and Arabic Strategy for Literacy (Thomure, 2019). Other than that, the government under the Ministry of Education is also focusing on rearranging leadership, teacher supervision, school leadership training, upgrading facilities and resources, and integrating technologies for Arabic-based education (Alhumaid, 2014).

U.S.A. is a good example of a non-Arab country where the teaching and learning of critical languages have increased since the year 2000. Amongst the critical languages taught are Chinese, Hindi, Urdu, Korean, Persian, Portuguese, Russian, Swahilli, Turkish and also Arabic (Al Alili & Hassan, 2017). The tragedy of September 11, 2001 also became an important reason for learning Arabic in the U.S. During the years between 1998 to 2009, Arabic became the quickest expanding language at American universities. The U.S. believes that a strong understanding of Arabic can benefit them in terms of preparing their students for career enhancement in the future. Arabic fluency can lead to jobs in business, diplomacy, journalism, public policy, defence, engineering, health care, and many other competitive fields (see Edwards, Ander & Herda, 2015).

Malaysia is also a non-Arab country that sees Arabic as an important language because most of the citizens of Malaysia are Muslims. Arabic language is closely related to the Islamic religion because in order to understand Islamic teachings, it requires the understanding of the Holy Qur'an (which is in the Arabic language). The history of Arabic instruction in Malaysia began with the arrival of Islam around the 13th century (Omar, Ali, Salleh & Abdullah, 2017). There are many examples that show the arrival of Islam on the Malay Peninsula but the most important was the discovery of 'Batu Bersurat Hulu Terengganu'. The inscription on the stone tablet shows that the coming of Islam to the Malay Archipelago was earlier than the date it was mentioned (Mat Teh, Firdaus & Nasir, 2019). Based on history, the development of Islam was also through marriage and trade with scholars who were educated from the Middle East. Since then, Arabic language started to be learned through informal institutions such as the mosque and the teacher's house. Later, the learning process become more formal in 'pondok' institutions. Literally the word pondok in Malay means hut.

Pondok became an early learning institution where the space to study was either in the house or in the small mosque near the teacher's house or even the small houses around that area where pondok students stayed during the 19th century. Here, Arabic language and Islamic subjects are taught by teachers called *ustaz* (male) and *ustazah* (female) (see Omar, Ali, Salleh & Abdullah, 2017). From that point onwards, Arabic continues to grow until today and it has successfully gained a place in the national education system of Malaysia. Arabic also influenced the process of language assimilation especially Malay vocabularies. There are many Malay words that came from the Arabic language such as *solat, zakat, baki, dakwah, dunia, falsafah, takwim, jadual* and so on. The uniquely Malay Jawi script is incidentally the result of Arabic influence on Malay. It began when early missionaries that came to the Malay Peninsula were all Arabs. For the purpose of education and to spread Islam, they had to write and translate the Qur'an and other religious books from Arabic to Malay resulting in the birth of Jawi manuscripts (Yahaya, 2016). The arrival of Islam in Malaya / Malaysia brought the influence of the Arabic language and it continues to be prevalent until today in homes, schools, and universities.

2.2   Learning Arabic at Malaysian universities

The study by Mat and Wan Abas (2016) on Open University Malaysia students found that Arabic continues to be useful as a third language and for those who must take university courses in Islamic Studies. Another research by Lotfie and Ghalib (2013) which examined students' perception of Arabic courses found that within an Islamic university curriculum, the language allows students to acquire core language skills to read and appreciate Islamic texts. Following to that, it is meant to enable students to combine their Islamic standpoints with the subject matters of their core academic disciplines. From their findings, students learn Arabic to enhance their confidence and motivation to read and write Arabic texts such as to recite the Qur'an correctly. Not to mention, learning Arabic improves their reading sub-skills and memorization techniques of Arabic words and phrases.

In another study, researchers Arifin, Riddzwan, Abdul Latiff and Abdul Halim (2014) piloted a survey to determine the attitudes of distant learning students towards learning Arabic language skills. The researchers found that because Arabic is important internationally, students felt that it is crucial to acquire it so that they are can talk and mingle within Arab communities if they ever furthered their university studies in Arab nations. In another research by Yusri, Rahimi, Shah and Wan Haslina (2011), most of their research participants showed positive attitudes to oral Arabic. They perceive the language to be distinctive, beautiful, and they really felt excited and fascinated when speaking Arabic, despite just uttering simple words and phrases. The positive status of the language is also linked to the religion of Islam. Practice favoured novice students in terms of subject difficulty especially when they had prior lessons of Arabic. Thus, these university students thought that Arabic was simple to understand, and they can master certain themes easily because they had previously learned it in school (see Adnan, 2017a, 2017b).

2.3   New technologies to teach the Arabic language

Integrating technology to ease the process of learning and teaching has become an important part of today's classroom. The integration of technology in education is not just about allowing learners to learn, but about being able to think rationally, engage in knowledge-seeking, and ensure their survival in the real world. Nawi, Hamzah and Abd Sattai (2014) highlighted that the teaching and learning approaches for learners of this digital age must be creative and effective to make sure that these targets are met. In the field of languages and linguistics, technology is taking over traditional methods of language teaching. Technology is now used to support and develop the learning of languages immensely. This trend can be seen in Arabic language classrooms too, as it is the lingua franca of the Arab world (Al-Jallad, 2018). In teaching the Arabic language, integration of technology allows teachers to adjust classroom practices to encourage the language learning process.

It is necessary for teachers to integrate technology in Arabic teaching for many reasons. First, the effective deployment of technology can help to enhance the culture of critical thinking among learners; it can shape learners' understanding of the real world better. This would later prepare learners to be more adaptive to global trends efficiently and effectively so that they will not be left behind. It is the educators' responsibility to develop sets of individuals who are keen to face changes around them. Abu Samak (2006) stated that the importance of education technology is a global issue that leads to the progress of developing nations. Second, the integration of technology in Arabic classrooms is a must as it enables learners to create meaningful contents and connections by seeking information as they learn. Mills (1999) mentioned how learners' interest and involvement in language learning increase dramatically with technology. In Malaysia, Arabic language instruction has undergone many changes in line with improvements in technology. With the introduction of new methodologies and approaches, Arabic language learning and teaching are becoming dynamic and resourceful (Lawal, 2017). However, it is quite a challenge to adapt new technologies to Arabic language teaching as most technological advancements in language instruction are dominated by the English language both for apps and hardware (Ditters, 2006; Karim, Adnan, Salim, Kamarudin & Zaidi, 2020; Karim, Adnan, Tahir, Adam, Idris & Ismail, 2020).

Among the most common Higher Education 4.0 technologies that can be found in Arabic language classrooms in Malaysia are computer-assisted language learning (CALL) and blended

learning (BL). In Arabic language instruction environments, researchers claim that CALL is still in its early stage especially in Malaysia (Sahrir, Yahaya & Nasir, 2013). This can be seen in the lack of collaboration between Arabic content developers and instructional technologists. Zawawi (2008) stated that CALL is such a strange concept in Arabic language classrooms because Arabic teachers prefer to use traditional methods of teaching. Besides that, the incompetency in handling computer especially amongst 'veteran' language teachers is a barrier in employing CALL in Arabic education in Malaysia. That being said, blended learning (BL) is widely deployed in Arabic language education at Malaysian higher learning institutions. Banditvilai (2016) defined BL as an education approach that incorporates online education materials and interaction opportunities with traditional classroom medium. BL requires both the teacher and learners to be present, and learners are allowed some control over time, location, medium or pace of their learning. Alasraj and Alharbi (2014) argued that the integration of blended learning materials in the Arabic language classroom has made learners less dependent on teachers. The learners are allowed to explore the educational materials on their own using multiple approaches, hence they do not have to rely on their teachers in completing lessons.

2.4   *Problem statement and research objectives*

The Fourth Industrial Revolution is really transforming the planet (Adnan, Karim, Tahir, Mustafa Kamal & Yusof, 2019). Artificial intelligence (AI), robotics technology, big data analysis and the Internet of Things (IoT) will converge to impact teaching, learning, and working. Some changes have been embraced by institutions to make Education 4.0 a reality (Adnan, 2020). For instance, students can use collective apps to carry out group tasks and assignments by computer, then upload them to the Net (Adnan, Ahmad, Yusof, Mohd Kamal & Mustafa Kamal, 2019; Mustafa Kamal, Adnan, Yusof, Ahmad, & Mohd Kamal, 2019). Hence, the teaching and learning environment is truly going paperless, abolishing chalk and talk and is conducted via open platforms such as Google Classrooms. A normal schoolroom will appear differently in the next five years; there will be changes in the physical layout as virtual and also augmented realities make their way into mainstream classes. Flexible tasks will make room for individualised learning styles, and Net learning options will impact education on all levels (Dunwill, 2016). As Shahroom and Hussin (2018) argued, things have become more complex. The younger generation today, the 'Millennials' or 'Generation Z', are equipped with digital literacy and they have their own styles and characters in terms of understanding, articulating, and communicating. This complex generation leans towards intelligent learning, which comprises pictures, sound, video, recreation, games, and Artificial Intelligence (AI). Hence, educators must go online and create instructional innovations to fulfil the needs and wants of the younger generation (Mohd Kamal, Adnan, Mustafa Kamal, Ahmad & Yusof, 2019; Ahmad, Adnan, Yusof, Mohd Kamal & Mustafa Kamal, 2019). Based on the preceding paragraphs, an empirical study was carried out to examine and realise two research objectives (research questions) as below.

One: What are the preferences of university students when it comes to learning Arabic using technological tools and apps?

Two: How should university lecturers adapt to teaching Arabic using technological tools and apps for the benefit of their students?

3.   Research Methods and Research Data Collection

Data collection for this study was done in late 2019 and early 2020. Data were collected using an online survey questionnaire with Likert-scale items and open questions to seek the opinions and feelings of respondents to the issues at hand. An eighteen-question online survey questionnaire was developed to measure the constructs in the two research objectives. Each item was linked to a 6-point Likert scale ranging from 'strongly disagree' to 'strongly agree' with no neutral choice in the middle. In order to identify if the items all reliably gauged similar latent variables (so that a Likert-type scale could be developed), a Cronbach's Alpha was run on test group of twenty similar respondents. Three items were then removed, and the final score attained was .879 meaning that the survey questionnaire is classified as 'reliable'.

In total, 250 respondents did the online survey questionnaire; these were undergraduate degree students from a public university campus in northern Peninsula Malaysia. More than half of the

respondents (64%) were female, whilst the rest (36%) were male. The majority of respondents were 21 years old (63.2%), whilst respondents aged 19 and 20 years made up the same number (11.2%). The rest of the respondents were 22 (8.4%), and 23 and above (6%). Also, the respondents were from the Faculty of Architecture, Planning and Survey, or the Faculty of Art and Design; the number of respondents from both faculties were about the same.

In general, there are several advantages of online data collection, particularly through online survey questionnaire. For instance, increased response rate and low cost. The low cost and handiness of online survey questionnaires bring high response rate, in our case 250 respondents (n = 250). In addition, respondents get to answer questions freely without any kind of pressure and at their own personal pace. Real time access also allows the online system to collect, tabulate datasets with total ease and in an instant, literally. This aids in the process of data analysis and allows the researchers to focus on other more pressing matters related to the research being carried out. At the same time, there are also some disadvantages with reference to online data collection. For example, uncontrolled sampling and uncontrolled data collection leading to low reliability and low validity of any datasets collected. With reference to sampling, although it is now norm, not everyone will have constant access to the Internet. Certain people, especially university students with limited income, might not have Internet access at all times due to the relatively high price of mobile Internet data. Still, one of the biggest detriments to online survey data collection is the notion of fraud. If, for example, the online survey questionnaire is too long and/or too complex, fake answers might be abundant. Due to the fact that there is less accountability online, chances are respondents will just hit certain buttons to finish the online survey questionnaire.

With these advantages and disadvantages in mind, the researcher sets out to study the teaching of the Arabic language to Malaysian university students using education technologies based on Education 4.0 principles. An online survey questionnaire was prepared and divided into three sections. The first section collected the respondents' demographic data such as gender, age, degree course and current semester, and information on the respondents' experience in learning Arabic. Then, the second section explores the respondents' perceptions on the implementation of technology in Arabic language learning and its effectiveness in improving the teaching and learning process. The third section is made up of open questions where the participants can further explain their opinions. In total, there are 7 questions for the first section of the online survey questionnaire, 15 items for the second section, and 3 open questions to end the questionnaire. The data collected are presented and then analysed.

## 4. Research Data Presentation and Data Analysis

The data collected were analysed descriptively to show percentages and frequencies of answers from the online survey questionnaire. This section presents the data together with the analysis and interpretation resulting from the data collection. Responses for each item and question were compiled and the highest frequency of occurrence was quantified and presented in percentage form. The presentation and analysis are done in the form of charts and graphs.

4.1 Demographic data

An overwhelming majority of the participants (90%) has learned Arabic before taking the course in the university, while only 10% of the participants did not have any prior experience of being in an Arabic language classroom setting. There are other options for a language elective course, such as Mandarin language course, however it can be deduced that majority of participants decided to take Arabic language course due to their familiarity of the language. By having the majority of the participants having experience of learning Arabic language beforehand, the participants have experiences of different teaching styles as well as the teaching aid used in the classroom as a basis for comparison, resulting in an expectation of a more varied and thorough responses from them.

f. If yes, where did you study Arabic (choose all that applies)?
250 responses
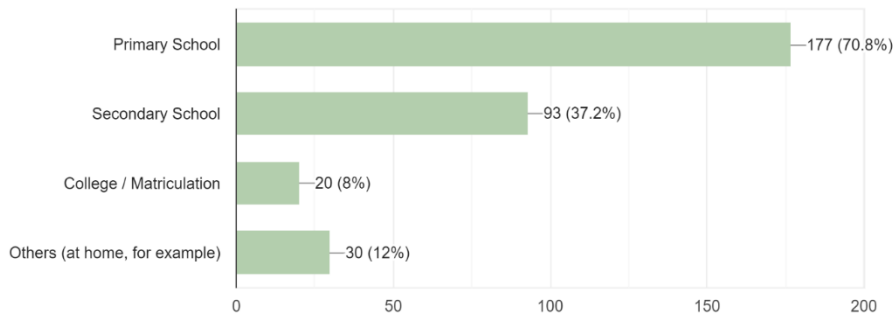
Figure 1: "Where did you study Arabic before university (choose all that applies)?"

For this particular item (Figure 1), the respondents may include two or more inputs to indicate that they have more than one period of time studying Arabic. For those that have studied Arabic language before, around two thirds of the participants (70.8%) previously studied Arab during their primary school years, while 37.2% did so during their secondary school years, followed by a minority of 12% for those learning them from other sources or location, and only 8% in college or matriculation. Finally, it can be observed that vast majority of participants are currently in the basic level of the Arabic language level (87.2%), followed by intermediate (12.4%), and only 2% of the whole participants are in the advanced level of Arabic language level. While almost all of the participants have indicated that they used to take Arabic language before, the level of mastery of the Arabic language is still at the basic level. This demographic data may allude to the lecturer using different instructional approaches to cater to the lower level of Arabic proficiency, including using technology in the classroom.

4.2 Survey items (Research Objective 1 – the preferences of university students when it comes to learning Arabic using technological tools and apps)

Based on the data collected, 136 participants (54.4%) agree that they will enjoy learning Arabic language if the lecturer uses more technology to teach, 65 participants (26%) strongly agree to the statement, with 32 participants (12.8%) slightly agree to cement the conclusion that the majority truly agree they will enjoy the lesson more if the lecturer introduces technology to teach as compared to only 6.8% of the participants who disagree on the matter. From this result, it can be established that by introducing more technology use in the classroom, students will be more open to the classroom activities, providing more options for lecturers in expanding their repertoire in teaching and learning.

03. I think I can learn Arabic better if the lecturer uses social media to teach me.
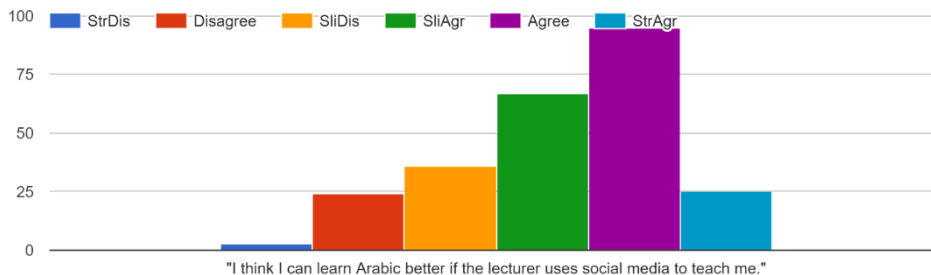
Figure 2: "What if my Arabic lecturer uses social media to teach this language?"

For the item focusing on whether the usage of social media can help the students to learn Arabic better (see Figure 2), the result is divided between participants agreeing and disagreeing, with 95 participants (38%) agree, 67 participants (26%) slightly agree and 25 participants (10%) strongly agree, while for the disagree participants, 36 participants (14.4%) slightly disagree, 24 participants (9.6%) disagree, and 3 participants (1.2%) strongly disagree with using social media. While the results skew more heavily into participants agreeing, the number of participants disagreeing is quite high. This result shows that even though the majority (74.8%) is open to the utilization of social media as part of the teaching aid, 25.2% of the participants do not believe that using social media will be constructive in learning Arabic language. While a lecturer can still try implement social media, some students might not be as receptive to it in the teaching and learning process.

04. I'll learn Arabic faster if the lecturer uses virtual reality (VR) simulations.
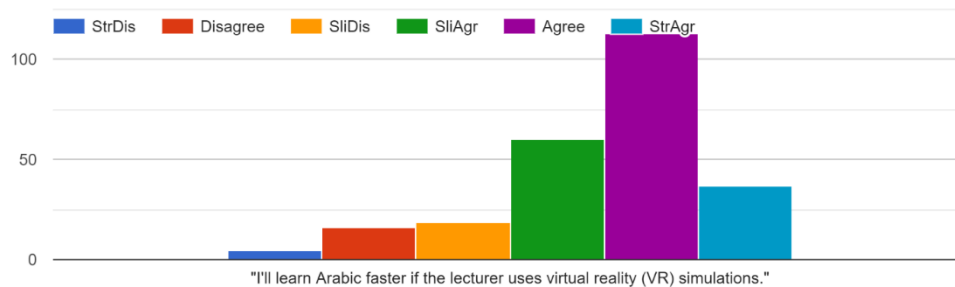
Figure 3: "What if my Arabic lecturer uses virtual reality to teach this language?"

In using virtual reality (VR) simulations as a teaching aid in learning Arabic language, majority of the participants (84%) agree that using VR will make it easier for them to master the Arabic language. A total of 113 participants (45.2%) agree with the implementation of VR, followed by 60 participants (24%) who slightly agree, and 37 participants strongly agree to the idea, while overall, only 16% of the participants disagree and making them the minority. The result signifies the students' interest in using a relatively new and recent technology such as VR in the Arabic language learning classroom, making it a viable option as a teaching tool (see Figure 3). With regard to the effectiveness of using augmented reality (AR) simulations in an Arabic language course classroom, 85.6% of the participants, in comparison to only 14.4%, agree that using AR simulations can help them learn Arabic language faster. About 116 participants (46.4%) agree to the idea, 71 participants (10.8%) slightly agree and 27 participants strongly agree, while 18 participants (7.2%) slightly disagree, ensued by 14 participants (5.6%) who slightly disagree, and only 4 participants (1.6%) strongly disagree with AR simulations. This result reflects the same curiosity and openness for the VR simulations item, where majority of the participants believed that the introduction of AR simulations in the classroom will be beneficial to them by providing an avenue where both VR and AR simulations can be advantageous as a teaching tool.

In comparison to the previous items on using technological tools as a learning aid, using game applications that are prevalent among English lectures garners the most support (Figure 4) with 86.8% of the participants agree with the statement in comparison to 13.2% disagreeing. For those who agree, 118 participants (47.2%) agree on the prospect of using game applications, 52 participants (20.8%) strongly agree, and 47 participants (18.8%) slightly agree, while only 19 participants (7.6%) slightly disagree with the notion, followed by 10 participants (4%) who disagree and only 4 participants (1.6%) strongly disagree.

Bucking the trend of previous technological tools such as VR and AR simulations, the result demonstrates that the number of participants who strongly agree is higher than the amount of participants who only slightly disagree, which is not seen in the previous items' data analysis. This result can be attributed to the participants' own familiarity of using game applications in an English classroom and benefitting greatly from it, contributing to the solid evidence of support for its usage in Arabic language classroom.

06. I'll learn Arabic better if the lecturer uses game apps like my English lecturers.
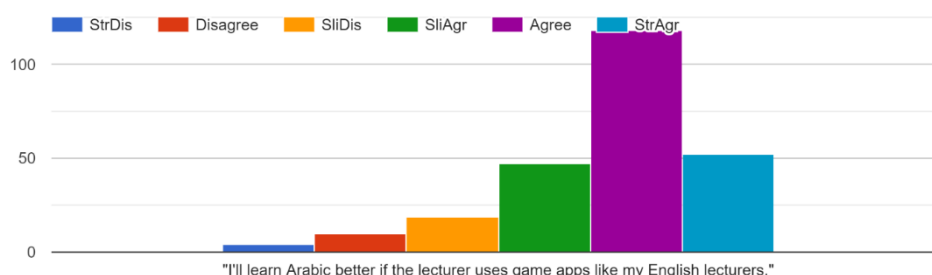
Figure 4: "What if my Arabic lecturer uses game apps like what English lecturers do in class?"

For the questionnaire item on the participants' perspective of whether the Arabic lecturer should only teach using the whiteboard to write examples, the data illustrates a split down the middle of opinion, in which half of the participants (52.4%) agree that only using the whiteboard is necessary, while the other half (47.6%) disagree and feel like technology needs to be implemented in the classroom. A total of 65 participants (26%) agree, 38 participants (15.2%) slightly agree and 28 participants (11.2%) strongly agree that the lecture should just use the whiteboard. However, 48 participants (19.2%) slightly disagree, 46 participants (18.4%) disagree and 25 participants (10%) strongly disagree on simply using the whiteboard without employing the technologies as visual aid. Even though a considerable majority of the participants already rely on technological tools to assist with their learning and are open to the introduction of new technological elements in the classroom, the result indicates that half of them still consider that not all aspects of the classroom should be based on the usage of technology, and that the whiteboard is already good enough in the display of information and example centred around the lesson.

For the questionnaire item on whether the participants feel that their Arabic lecturer should just ask them to memorise and repeat examples, the responses are mixed between half of the participants (55.2%) agreeing on the statement while the other half (44.8%) disagree instead. A total of 69 participants (27.6%) agree, 51 participants (20.4%) slightly agree and 18 participants (7.2%) strongly agree that Arabic lecturer should just use traditional memorisation techniques, while 54 participants (21.6%) disagree, 36 participants (14.4%) slightly disagree, and 22 participants (8.8%) strongly disagree with it. Once again, it can be observed that while most of participants are amenable to the usage of technology in the classroom, their opinions are split on whether traditional methods like memorisation techniques should make way for technology-centred teaching and learning methods.

Next, in Figure 5, based on the data we collected, more than half (66.4%) of the participants do not agree that their Arabic lecturer does not use any new technologies as teaching tool or aid in class, while 33.6% of the participants feel the opposite. About 81 participants (32.4%) disagree with the statement, 58 participants (23.2%) slightly disagree and 27 participants (10.8%) strongly disagree, while on the other side, 39 participants (15.6%) slightly agree, 38 participants (15.2%) agree and only 7 strongly agree (2.8%) with the statement.

The result shows quite a mixed review with a skew on disagreeing on the statement that their lecturer does not use technologies in the classroom. It can be gathered that while most Arabic lecturers are already using technologies in the classroom, there are still some who are still using the conventional method in the Arabic language classroom.

10. I feel that my Arabic lecturer doesn't use new technologies to teach us in class.
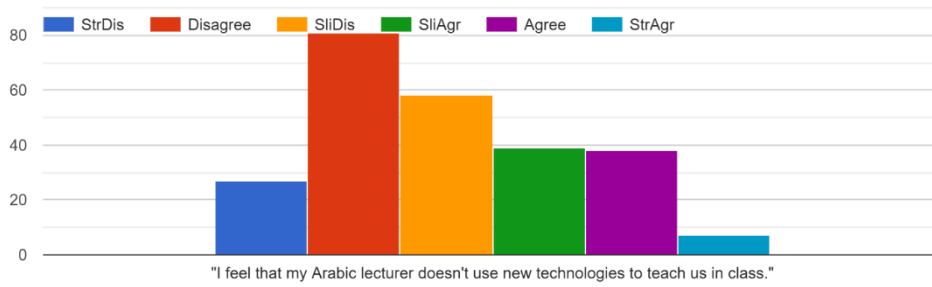
Figure 5: "My Arabic lecturer does not use new technologies to teach us"

At the same time, the majority of the participants (86.8%) agree in general that their Arabic lecturers should teach Arabic language using new technological tools and applications (see Figure 6), where 119 participants (47.6%) agree, 63 participants (25.2%) slightly agree and 35 participants (14%) strongly agree with the statement, whereas only a minority (13.2%) disagree with the statement, with 20 participants (8%) slightly disagree, 8 participants (3.2%) disagree and 5 participants (2%) strongly disagree with it. The result supports the notion that the participants believe technological tools and application should be introduced in the teaching session to make it more interesting, easier to learn and immerse themselves in learning Arabic language.

13. I believe my lecturers should teach Arabic using new technological tools and apps.
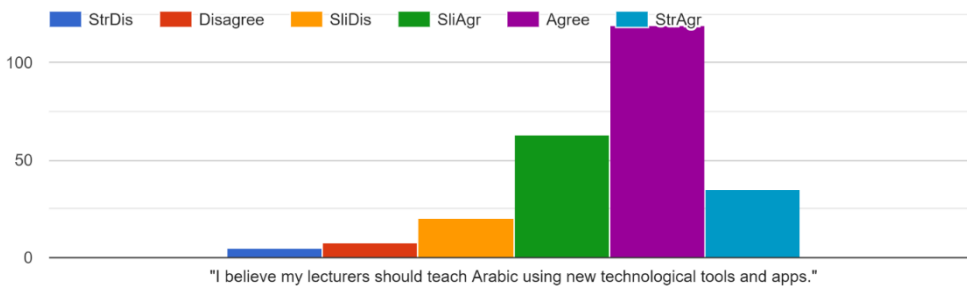
Figure 6: "My Arabic lecturer should use new technologies to teach us the Arabic language"

That being said, nearly three quarter of the respondents (73.3%) do not believe that their Arabic class is a bit too traditional and boring at the moment, with 93 participants (37.2%) disagree, 58 participants (23.2%) strongly disagree and 32 participants (12.8) slightly disagree with the statement, whereas a minority (26.8%) do believe that for them Arabic language learning is boring for them, with 36 participants (14.4%) choosing slightly agree, 24 participants (9.6%) agree and 7 participants (2.8%) strongly agree. The data showed that the majority feel that their current Arabic language class is not too traditional, supporting the data which showed that half of the participants do not agree their lecturers do not use new technologies in their class.

15. I believe that there are many apps and technologies to help us to learn Arabic.
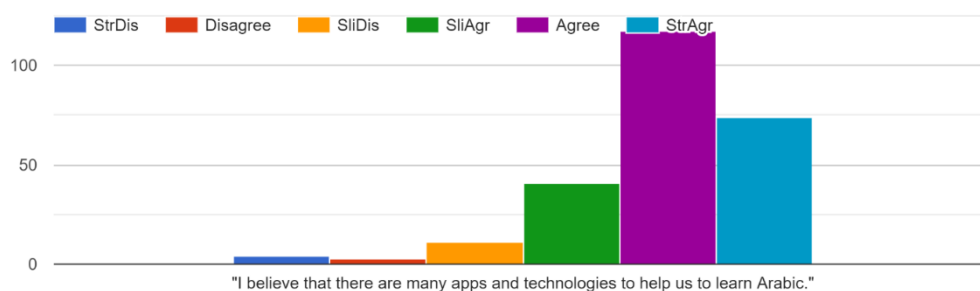
Figure 7: "There are many apps and technologies to teach us the Arabic language"

Finally, in Figure 7, an overwhelming majority of the participants (92.8%) believe that there are many applications and technologies available in the open that can be used to help them learn Arabic language, and only 7.2% of the participants disagree with the statement. A total of 117 participants (46.8%) agree with the statement, followed by 74 participants (29.6%) strongly agree and 41 participants (16.4%) slightly agree, whereas 11 participants (4.4%) slightly disagree with the statement, and only 4 participants (1.6%) strongly disagree and 3 participants (1.2%) disagree. The result shows that the participants believe there is a plethora of applications and technologies that can be used to help them learn the Arabic language, with only a negligible amount who do not share the same sentiment. Thus, it can be concluded that the participants believe in the benefits of using technologies for their Arabic classes.

4.3 Open questions (Research Objective 2 – university lecturers adapting to teaching Arabic using technological tools and apps for the benefit of students)

4.3.1 "Do you feel your Arabic lecturer should use more technology to teach this language?"

About 72.8% of the participants said "yes" in which their Arabic lecturer should use more technology to teach Arabic language in the classroom. For those who answered yes, some common theme for the reasons for their answers can be observed as following: To provide variety in their learning; Students are actively using technology, for example using their smartphones; and Traditional methods such as group works, mind mapping and presentations could sometimes be boring. In contrast, 24.4% of the participants answered "no" instead. For those who answered no, some common theme for the reasons of their answers can be observed as following: Traditional methods are enough, for example, using textbooks, whiteboards; Without proper implementation, technology will still not be as beneficial; The current method of teaching is good enough. Another 2.8% of the participants did not answer either yes or no as they believe the use of technology to teach Arabic should depend on the situation. One participant mentioned that a balanced use of traditional method and technological tools should be achieved.

4.3.2 "Will the use of technology help you and your friends to learn Arabic better?"

About 85.6% of the participants agree that the use of technology will help them and their friends to learn Arabic language better. For those who answered yes, some common themes for the reasons of their answers can be observed as following: Physical lecturing is not enough; Easier to look for examples such as videos and translations; and Makes it easier to memorize Arabic vocabularies. Meanwhile, only 8% of the participants answered that technology will not help them to learn Arabic language better. Three common reasons were observed from those who answered no which are the cost of using technologies, using traditional method is good enough and using technology makes it harder

for them to understand the language. About 6.4% of the participants said that they are unsure, and one common reason discerned from this percentile is that it depends on the individual whether or not using technology will make it easier to learn Arabic language.

4.3.3 *"Compare learning technologies for Arabic with learning technologies for English. What can you observe between both?"*

From the data collected, there are various themes that can be observed in the comparison of learning technologies between Arabic and English: Technologies for English instruction are more widely approached resulting in more learning materials as compared to Arabic language; It is more suitable to use technology in learning English as compared to learning Arabic language; In learning Arabic language, the full potential of technology is not fully utilized, for example, Arabic language class only use videos as teaching aid; There are not many people who use Arabic language as compared to English language, thus there are little technological tools that can be used to learn Arabic language; In learning Arabic language, the Arabic letters is a limitation as to use Arabic language the students need to use keyboards that have a built-in Arabic letters, making it harder to learn as compared to English; and Learning both Arabic and English can be fun if technology is used as both are language subjects.

5.   Conclusion

This study with quite a large population shows that university students do want their Arabic language lecturers to support the teaching and learning of this 3rd language using technological apps and tools. At the same time, traditional methods like chalk and talk, and also language drilling, seem to be preferred by a number of university students. When asked to compare between English and Arabic, they feel it is more appropriate for the former to be taught with technology when in truth, the level of technological adoption by their Arabic language lecturers might actually be much lower compared to English language lecturers (see Adnan, Ya Shak, Karim, Tahir & Shah, 2020) based on data collected from the online survey items.

6.   Acknowledgement

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