



## EMPOWERING STUDENT ENGAGEMENT IN L3 THROUGH TEXT CHAT DISCUSSION

Harun Baharudin<sup>1</sup>, Zunita Mohamad Maskor<sup>2</sup>

<sup>1</sup>Faculty of Education, Universiti Kebangsaan Malaysia, 43600 Bangi, Malaysia

<sup>2</sup>Faculty of Education, Universiti Kebangsaan Malaysia, 43600 Bangi, Malaysia

<sup>1</sup>[harunbaharudin@ukm.edu.my](mailto:harunbaharudin@ukm.edu.my)

**Harun Baharudin, Zunita Mohamad Maskor. Empowering Student Engagement In L3 Through Text Chat Discussion-- Palarch's Journal Of Archaralogy Of Egypt/Egyptogy 17(3), 291-313. ISSN 1567-214x**

**Keywords: Learners' Attitudes; Computer-Mediated Communication; Mobile Learning; Instructional Design**

### ABSTRACT

Efforts towards the simplification of Arabic grammar as a third language (L3) require the utilization of social media to foster active language learning competencies. Hence, this study aims to explore students' usability and attitude towards WhatsApp application in the linguistic learning of Arabic. Participants of the study were 136 students under the Arabic language program at a public university in Malaysia. The qualitative survey data involved 25 students out of the total who selected through a purposive sampling technique. This survey study incorporates a mixed method of research with questionnaires adapted from two different studies; Gamble & Wilkins (2014) and Izyani & Mohamed Amin (2016). The qualitative survey data collected via semi-structured group discussions conducted in a bilingual (Malay and Arabic) environment in a WhatsApp group. The findings as a whole reflect the effectiveness and usability of WhatsApp application in complementing face-to-face learning in which the application acts as a tool for Arabic linguistic learning. The implication of the study shows the effort towards Arabic linguistic simplification is effective through WhatsApp applications by enhancing student-level attitudes. Nevertheless, studies on Arabic linguistic simplification based on Arab scholarly models through social media application need to be explored..

*Language(s) Learned in this Study: Arabic*

## INTRODUCTION

The impact of globalisation requires many countries to register the third language (L3) as an elective language in their education curriculum (Ameri & Asareh, 2010; Negadi, 2015). The discussion on the acquisition of the L3 began to develop, and many countries or places have more than two languages in a community. Furthermore, there are current studies prove the advantages of multiple language skills (Bartolotti & Marian, 2016). It is common to know that L3 learning is different from mother tongue (L1) (Hwa & Subramanian, 2017) and second language (L2) (Jabari & Salimi 2015; Ooi 2017; Falk & Bardel, 2010; González Alonso & Rothman, 2017). L3 learning refers to the process of acquiring languages other than L1 and L2 that have been mastered and studied whether the process occurs simultaneously or sequentially (Cenoz 2001).

L3 learning, especially involving linguistic factors such as linguistic elements is more challenging as there are more influential coding transitions between the language system (Puig-Mayenco, González Alonso & Rothman, 2018). Additionally, L3 education is still plagued with non-lingual issues such as weak language performance, students' mastery, and conventional teaching approaches and methods which result in passive students (Ma, 2011; Tucker, 1998; Ballman, Liskin-Gasparro & Mandell, 2001; Gulmez 2012; VanPatten & Benati, 2015). These researchers also recorded that students attribute feeling bored and challenged in Arabic lessons, apart from issues like the lack of vocabulary acquisition, appropriate textbooks, auxiliary materials as well as teachers and experts. Not only that, learners' cultural and individual backgrounds, linguistic differences, growing concerns and a non-comprehensive language environment, are evident issues (Tucker, 1998; Ballman et al., 2001; Gulmez 2012; VanPatten & Benati, 2015). These issues summarise that the L3 learning process takes a long time, requiring many inputs and interactions as well as an active and cooperative learning environment (Blake, 2008; AbuSeileek, 2012; Zahedi 2012; Yang, Li & Xing 2018).

## LITERATURE REVIEW

### *Arabic Linguistic Learning Issues*

Some studies also acknowledge the complexity of the Arabic language that resembles the complexity of Japanese and Russian languages, which raises concerns among non-native speakers (Al-Suwairekh, 2001; Kataw, 2016). The development of Arabic grammar while demonstrating its learning still tends to use a classic approach which emphasises the concept of flexibility (*i'rab*), derivation (*isytiqaq*) and the concept of *amil makmul* (factor transformer) (Omar, 2014). This approach led to the Arabic language as L3, often emphasising that the structure of language builds alone without focusing on language function, especially in developing its communicative aspects. Therefore, among the recommended solutions, Arabic linguistics should be actively studied and emphasised on its communicative function (Fahrurrozi, 2014) through the concept of grammar simplification (Omar, 2014).

The Arabic language learning in Malaysia continuously deals with repeating issues such as weak language performance, students' mastery level, and

conventional teaching approaches and methods (Linamalini & Kamarul Shukri, 2014; Harun & Zawawi, 2015; Harun, 2018). Similarly, students are passively involved in the learning process as the classes are not stimulating while at the same time difficult aside from the lack of auxiliary materials, a non-comprehensive language learning environment and limited vocabulary. Based on these issues, Arabic language teaching and learning (T&L) should go through a paradigm shift in ensuring that the learning problems resolved. A previous study by Zaidieh (2012) which examined the use of social media in 3L teaching such as Facebook, found that the platform contributes to positive findings and can change the attitudes of students towards learning.

The use of teaching aids that fit the cognitive level of students can facilitate self-directed learning based on their learning needs. Berk (2009) recommended that each course should use video clips as a teaching tool so that students can experience remarkable cognitive experiences, which will positively affect their emotions during the learning process. Mayer (2002) explained that the visualization process might seem passive, but it promotes a high cognitive activity for active learning. Suitable multimedia learning materials can deliver messages and support an active cognitive process among students (Cruse, 2011). The content creation and visual contexts are the two crucial elements in ensuring active students' involvement in the classroom (Stanovitch & Cunningham, 2004). These findings demonstrate that the students can learn actively, independently and with greater flexibility using media and technology.

It proved that students are interested in learning with the presence of interactive multimedia as it reduces learning boredom (Zaidieh, 2012). Besides, it encourages students to be active as the learning software was equipped with interactive elements. With this application, teachers do not have to worry about the content revision which is generally done by students outside of the classroom as this application will act as a 'teacher' since it contains audio and visual displays. Teachers can also act as facilitators for students during the T&L process, which supports a more self-directed learning environment.

The success of the L2 or L3 learning, takes into account the learning period, the learning inputs and the social interaction (Blake, 2008). Recent developments and advances in internet, technology, media, and the use of target languages such as English and Arabic in social media networks, provide more significant opportunities for language students to practice the language which is more meaningful and authentic than the learning materials provided in the classroom (Richards, 2015). Such innovative technological feature is found to enhance students' interest and motivation, facilitate their access towards target language input, give them more opportunities for interaction and giving feedback as well as allowing them greater autonomy in determining the language learning. Technological advancements and developments such as an electronic dictionary, the internet, social media networks and speech technology have created a space and opportunity for L3 students to practice and improve free social intercourse beyond the classroom (Abdullah & Azman, 2019).

### *Social Media in Language Learning*

The current trends of the 21st Century Learning (CL21) have moved towards making students more autonomous, interactive as well as diverting learning responsibilities towards students. CL21 was continuously evolving and encouraging more learning strategies exploration, such as blended learning and flipped learning. The concept of this approach emphasises the combination of different learning methods, techniques, and learning resources and applies them in an interactive learning environment (Saeheng, 2017) while leveraging the multimedia world. Similarly, in the world of language education, which embraces the communicative approach, sees the importance of multimedia tool applications to foster efficiency in language learning (Ntongieh, 2016). Hence, utilising digital technology in Arabic language T&L is a necessity to overcome some of the issues discussed in L3 learning. Technological innovation if used correctly can increase students' interest and motivation, reduce concerns, facilitate students' access on target language input, give them more opportunity of interaction and feedback as well as direct instructors to organise course content (Bates & Kasawneh, 2007; Sun & Rueda (2012).

Various studies related to the learning of L2 and L3 through social media such as Facebook (FB) (Mazer, Murphy, & Simonds, 2007; Kabilan et al., 2010; Promnitz-Hayashi, 2011; Yunus & Salehi, 2012; Rahimi, NM. et al., 2015), *WhatsApp* (Yeboah & Ewur 2014; Nitza & Roman, 2016), *Twitter* (Mork 2009; Blattner & Fiori, 2009; Mompean & Fouz-González (2016) and *Telegram* (Xodabande, 2017), resulted in a positive influence on students' motivation, involvement and attitudes. In addition to motivating, social media is also used to communicate with students, to foster a social atmosphere and student engagement in the classroom, to form dialogue and cooperation between students (Mills, 2011; Chen et al., 2018).

Through some technology acceptance models in the field of education, the usability aspect is seen as essential to assess a particular choice of technology before the students used it (Sharma & Chandel, 2013). Usability commonly defined as the extent to which the user has easily used the specific interface to achieve the targeted goal with success, proficiency, and contentment in an identified circumstance of use. Holzinger (2005) stated that fundamental usability elements that will review are "efficiency, learnability, memorability, and error". Usability in terms of technology usage is among the critical determinants in integrating technology in education (Lai & Chen, 2011). Gamble and Wilkins (2014) believe that FB's usability aspect is a factor that improves students' positive attitudes towards language learning. The usability aspect is a predicting factor that has a linear relationship between students' attitudes and the use of technology (Tulinayo et al., 2018; Wang et al., 2019). The usability aspect of technology widely examined by previous researchers using various types of technology acceptance models (Agatha & Muhammad Suhaimi, 2016; Kumar & Mohite, 2017; Buabeng-Andoh, 2018; Ifinedo, Pyke & Anwar, 2018; Wang et al., 2019).

This study aims to focus on the usability aspect of '*WhatsApp*' technology using the Technology Acceptance Model (TAM). Therefore, a study was conducted in the context of Higher Education Institutions (HEIs) in Malaysia to investigate and determine whether *WhatsApp* can be used to enhance Arabic language knowledge, particularly linguistic knowledge, understanding and usage. The focus is on Arabic linguistic knowledge because, in the context of HEIs, the linguistic knowledge of students is related to their performance in the basic understanding of a language (Qian, 2002). This opinion is the reason why it is considered as a critical factor that contributes to the learning development and skills acquisition of non-native speakers (Carlisle et al., 1999). The research questions of this study are; 1) what is the usability level of *WhatsApp* application in Arabic linguistic learning? Also, 2) how are students' attitude towards the learning activities conducted on the *WhatsApp* platform to learn Arabic? This research is essential in terms of leveraging technological interests and trends, especially in the use of *WhatsApp* as well as promoting the idea of enhancing Arabic linguistic knowledge. It will also extend the importance of current research related to *WhatsApp* applications for Arabic language T&L and pave the way for new research opportunities.

## **METHOD**

This study uses a mixed-method approach that will produce meaningful information as the second phase qualitative data based on significant predictors (Creswell & Park, 2007). Quantitative data was collected using questionnaires, and consecutively, the qualitative data serves as an interpretation to help to explain or better comprehend quantitative results. The qualitative method is used to strengthen and amplify the validity of the quantitative data. The qualitative data aims to determine whether students can acknowledge that they have learned and acquired Arab linguistic knowledge (usage and practice) through the learning activities conducted. Whereas, through the qualitative approach, the use of *WhatsApp* in Arabic linguistic learning can be looked at in detail in terms of its communication elements (Gay et al., 2009). Qualitative data collected through semi-structured *WhatsApp* group discussion transcripts which went on for seven weeks. The qualitative survey data collected via semi-structured group discussions, which were conducted in a bilingual (Malay and Arabic) environment and based on a course assignment that focuses on weekly topic discussions.

### ***Participants***

Participants of the study were 136 students under the Arabic language master program at a public university in Malaysia. The qualitative survey data involves 25 students out of the total are selected through a purposive sampling technique. All participants were full-time students with diverse backgrounds and learning experiences. Based on discussions with lecturers, students had mobile phone facilities and were active users of *WhatsApp* as a medium of communicating and interacting. However, the students had never used *WhatsApp* for Arabic linguistic learning.

## ***Procedure***

This study contains three phases, namely:

### **Phase 1: Early planning**

During the first week of the lecture session, a discussion among researcher and lecturers who taught the students conducted. The discussion was necessary in order to explain to the lecturers the purpose, objectives and procedure of the study so that the researcher can outline their roles and responsibilities based on the proforma measure. A topic of an assignment given to the students contain the subtopics of the *al-lughat al-'arabiyyah: ma'naha wa mabnaha* book written by Hassan (1985), weekly. The six topics are *al-kalam wa al-lughah* (speech & language), *al-nizom al-shawti* (phonological system), *al-nizom al-shorfiy* (morphological system), *al-nizom al-nahwiyy* (syntactic system), *al-mu'jam* (lexicology) and *al-dalalah* (semantic). Two days before the presentation, the material uploaded into the *WhatsApp* group for initial discussion and improvement.

### **Phase 2: WhatsApp discussion**

In this phase, the lecturers teaching the courses used the proforma in the *WhatsApp* group. Instructions and guidance were given when necessary, especially when students did not know or understand what to do. The T&L activities on *WhatsApp* include:

- i. Two days before the face-to-face classroom training, there was a discussion session on weekly issues. Students who were in charge of presenting during the specific week would have to upload their presentations in Microsoft PowerPoint format. All students read the written materials and requested to evaluate and provide feedback on the question via *WhatsApp* group.
- ii. The lecturers upload other materials such as text clipping, videos, pictures, online dictionaries and other websites related to the weekly discussion topics to help students learn. For the topic of *nizom al-shawty* (phonological system), the responsible group broadcasted a video link of how the words and letters printed. Students were asked to view the video and evaluate the referrals displayed in the video. The students obliged to focus on articulating organs. The students used an online dictionary in the following link; <https://www.almaany.com/> to refer to and find the meaning of words used in the video, especially those involving phonological terms that they did not understand.
- iii. The lecturers were reviewing the attached presentation materials such as PowerPoint slides, videos, texts and pictures. After that, the students required to write a reflection (in the form of an essay) on *WhatsApp*. This reflection considered feedback on the learning that took place every week. After each face

to face lecture, the lecturer will reflect on and discuss the subjects taught at the classroom in-depth with the students through *WhatsApp* after the class.

### **Phase 3: WhatsApp usability questionnaire**

All students under the Arabic language master's degree program were given questionnaires to respond to the topic of *WhatsApp* usability in the 9th week of the semester. They were given 60 minutes to respond to the application's effectiveness and usability.

### ***Instruments and Data Analysis***

This study adopted a questionnaire from two different studies. The usability aspect of *WhatsApp* usage adapted from Gamble & Wilkins (2014) and Izyani & Mohamed Amin (2016). It was translated and examined by three experts from various areas of expertise (such as psychology, Arabic studies and multimedia) and converted into 'google form' before conducting a pilot study to 30 participants. The final version of the questionnaire sent via e-mail to the respondents. The questionnaire divided into two parts. Part A detailed on participants' background such as gender, age, learning mode, the semester of study and frequency of using *WhatsApp* application in smartphone. Section B investigated their expectations of acceptance based on the TAM model (Abdullah & Azman, 2019). The acceptance level was measured using five Likert scales. Even though this study's instrument has certifiably good reliability in previous studies, its reliability has been re-estimated through the value of Cronbach's Alpha ( $\alpha$ ) to report internal consistency. Cronbach's Alpha value for usability construct was .93, and the construct of attitude was .89. The findings from the questionnaire were collected and then coded, calculated and processed using the SPSS 25.0 software, where the mean and standard deviation statistics were used to illustrate the level of *WhatsApp* usability and students' attitudes. Qualitative data analysis was used to analyse the data obtained from the transcription of semi-structured *WhatsApp* group discussions. The coding strategy, activity code and state code were used to help categorise the themes from the qualitative data (Bogdan and Biklen 1992).

## **RESULTS**

Through the scales of acceptance level, the usability level of *WhatsApp* application in Arabic linguistic learning data were obtained and inserted into SPSS 25.0 for analysis.

### ***Usability Level of WhatsApp Application in Arabic Linguistic Learning***

As shown in Table 1, the usability aspect of *WhatsApp* at a moderate level based on the mean score interpretation, which is at 3.66. The highest item score for *WhatsApp* is 'a good medium to hear audio as a preparation for future Arabic classes' (M = 4.06, S.D = 0.78). The majority of participants, 77 students or

56.6%, agreed with the item's statement. 38 participants or 27.9% choose to agree with the same item. The item for the usability aspect with the lowest mean score is, 'to send writing assignments such as short stories or essays in Arabic' (M=3.25, S.D = 1.06).

**Table 1.** Usability Level of WhatsApp Application

No.	Item	Mean	Std. Dev	Interpretation
1	<i>WhatsApp</i> is a good medium to listen to audios as a preparation for the upcoming class.	4.06	0.78	High
2	<i>WhatsApp</i> is a good medium to read articles to audio as a preparation for the upcoming class.	3.83	0.89	High
3	<i>WhatsApp</i> is a good medium to watch YouTube videos as learning materials for this course.	3.80	0.94	High
4	Interaction via <i>WhatsApp</i> helps me become active in learning.	3.73	0.83	High
5	Interaction via <i>WhatsApp</i> helps me improve my confidence in the discussion.	3.66	0.88	Moderate
6	<i>WhatsApp</i> is a great place to hold discussion with "invited group members" like native speakers.	3.65	0.92	Moderate
7	<i>WhatsApp</i> is a great place to post video assignment for this course.	3.63	0.94	Moderate
8	<i>WhatsApp</i> is a great medium to discuss weekly topic for this course with friends.	3.62	0.76	Moderate
9	<i>WhatsApp</i> is a great medium for students to access learning materials provided by lecturers for this course.	3.58	0.93	Moderate
10	<i>WhatsApp</i> is a great medium to check and edit peers' presentation assignments.	3.55	0.97	Moderate
11	<i>WhatsApp</i> is a great medium to send written assignments such as reflections or essay in Arabic.	3.25	1.06	Moderate
	<b>Overall Mean</b>	<b>3.66</b>	<b>0.90</b>	<b>Moderate</b>

*Attitudes and Behaviors Arabic Linguistic Learning Practices Conducted in WhatsApp's Environment*



Qualitative data obtained was used to support and explain quantitative data. Condition codes assigned to the data units that describe students' practices in Arabic linguistic learning using *WhatsApp*. The activity code was assigned to a data unit that illustrates the behaviours that students often experienced such as conversations that occurred as a result of their activities in the *WhatsApp* group (Bogdan & Biklen, 1992) (see Table 2).

Table 2 shows the attitudes and behaviours of Arabic linguistic learning practices conducted in *WhatsApp's* environment. Qualitative data from *WhatsApp* group discussion transcripts confirm the quantitative data on the usability of *WhatsApp* as a medium of Arabic linguistic discussion and learning.

## DISCUSSIONS

The findings show that the usability aspect seen as an essential factor in the usage practice or students' acceptance of the use of *WhatsApp* as a tool for Arabic linguistic learning. Sharma and Chandel (2013) claim that the aspect of technological usability is a determinant of technology usage among students. The study of al-Meshal and al-Jasser (2017), al-Qahtani (2019), Cao et al., (2016) and Das & Mandal (2016) proved the potential of the transfer of knowledge quality through social media.

The use of the audio system as a preparatory learning medium has become the most crucial aspect of *WhatsApp* usability compared to other aspects. This finding is in line with a previous study done by Gamble & Wilkins (2014) in which the majority of participants (49%) agreed that FB is an excellent place to hear audio files for language learning and an excellent place to draw notes from as preparations before class. The findings are similar with the study done by Sarrab et al., (2017) and Zhonggen et al., (2018) in which participants with the mobile learning platform are significantly more satisfied than those without it.

**Table 2.** Sample Schema to Record and Manage Data Based State Code and Activity Code

Extracts From Group Discussion	Analysis Code	Themes
<p>I refer to the link below to refer to the new textbook ... in the primary text books, of course, nizam sauti is included in the <i>al-huruf mutamathilah (identical letters)</i> aspect....for example, for year 4, in syllabus, <i>nizam sauti (phonology)</i> is emphasized... (activity code)</p> <p>I now know how the speech is based on <i>makhraj (places of articulation)</i> dan <i>sifat (manner of articulation)</i>... <b>the video helps a lot.</b> (activity code)</p> <p>I like to use almany dictionary link because it is a house of all kinds of dictionaries.... it saves time... (activity code)</p> <p>Sometimes confuse, العبارة غامضة بعض الشيء (<i>this sentences is sometimes confusing</i>). If I am not mistaken, in <i>ilmi aswat</i> book written by Dr Kamal Basyar mention, <i>ilmi aswat</i> is divided by 3, nutqi, akustiki and sam'ie (situation code)</p> <p>لكن لا أعرف معناها هذه الكلمات مرت بي كثيرا. (<i>this word is frequently found but I do not know the meaning of it</i>) (situation code)</p> <p>The new knowledge that I got. Tenses issues and <i>tadafur qarain (interlacing clues)</i> مرت بي قلة هذا لكن نادرة الاستعمال theory (I encounter this most of the times but it is rarely used) (situation code)</p>	<p>Students learn and share many new things about Arabic linguistics through links, videos and presentation materials.</p> <p>Active students share the latest educational issues related to Arabic linguistic knowledge.</p>	<p>Sharing new information on Arabic linguistics: <i>WhatsApp</i> as a medium for new information sharing</p>
<p><b>It is great, Dr. Use <i>WhatsApp</i> as a learning medium.</b> All active discussing. Nothing like in class. (activity code)</p> <p><b>I learn a lot of new things today.</b> Thank you for the given materials (situation code)</p>	<p>Students see <i>WhatsApp</i> as an informal learning platform for discussion and communication.</p>	<p>Learning medium of Arabic linguistic learning</p>

<p>Okay. <b>The discussion is useful</b>.....Just had a chance. I see...the discussion needs to be clear, to prevent misunderstanding (situation code)</p> <p>A lot of linguistic terms are not known or clear...have to ask and explore on our own...<b>The role of teachers is important in this situation...this is just my opinion</b>...(situation code)</p> <p>For slide 7, phonetic investigates the sound of language for example, makhraj (<i>places of articulation</i>), jihaz an nutqi (pronunciation organs) which is related to the process of how the sound is made.</p> <p>يمكن أن تشرح لي يا دكتور؟ (<i>can you explain, Dr?</i>) (situation code)</p> <p>I tried to understand this video but I am confuse with the pronunciation. من تعرف معناها؟ (<i>who knows the meaning</i>). Can <b>Dr. please explain this</b>. (activity code)</p> <p>Make sure all students to take part in the discussion....need to focus on issues related to education (situation code)</p>	<p>Students still want to learn face-to-face to experience teachers' knowledge and authority.</p>	
<p>Tammam hassan book's language is high, the content also contains a lot of new things. <b>Discuss in this WhatsApp also can</b>. If this is done individually, It would be more confusing (situation code)</p> <p>Maybe can refer to Dr. Tamam's book, page 52-57....a lot of new things for me, <b>have to ask lughah expert, (language experts) in here</b> (activity code)</p>	<p>Students are more motivated and active to discuss and they care more about their learning as they actively discuss.</p> <p><i>WhatsApp</i> provides a more comfortable platform for discussion. It makes the student to feel less stressed than the classroom environment.</p>	<p>Improve students' motivation and confidence to discuss.</p>

Students claimed and acknowledged the fact that many discussions done through the *WhatsApp* group had enhanced their Arabic linguistic knowledge encouraged them to seek clarification and explanation as well as share current information about their learning in schools (Al Muhsin & Ahmad, 2019). These findings have proven by the extracts verbatim of participants PK1, PK5, PK19 and PK7 found in the transcripts:

“I refer to the link below to refer to the new textbook ... in the primary text books, of course, nizam sauti is included in the al-huruf mutamathilah (identical letters) aspect....for example, for year 4, in syllabus, nizam sauti (phonology) is emphasized...(PK1)

Sometimes confuse, العبارة غامضة بعض الشيء (this sentences is sometimes confusing). If I am not mistaken, in *ilmi aswat* book written by Dr Kamal Basyar mention, *ilmi aswat* is divided by 3, nutqi, akustiki and sam'ie” (PK5)

هذه الكلمات مرت بي كثيرا. لكن لا أعرف معناها (this word is frequently found but I do not know the meaning of it?)” (PK19)

“The new knowledge that I got. Tenses issues and tadafur qarain (interlacing clues) theory  
مرت بي قبل هذا لكن نادرة الاستعمال (I encounter this most of the times but it is rarely used)” (PK7)

Presentation materials, videos, weblinks and visual materials were reported to give students a more precise understanding. The students also added that the dictionary links they found in the *WhatsApp* group were handy and they used them extensively (Enayat & Amirian, 2016). Participants PK 4 and PK3 claimed that:

“I like to use Almaany dictionary link because it is a house of all kinds of dictionaries.... it saves time...” (PK4).

“I now know how the speech is based on makhraj (places of articulation) dan sifat (manner of articulation)... the video helps a lot” (PK3).

Participants PK1, PK3, PK4, PK7 and PK11 agreed that web links and videos shared on *WhatsApp* can support their learning since they can listen to the correct pronunciation. They are also prone to visual and audio materials since the materials are exciting and ease the search for dictions. These features support Arabic linguistic learning through *WhatsApp* group discussions. The *WhatsApp* environment provides students with a platform containing meaningful context to learn Arabic linguistics from the perspective of education, and ultimately, enhances students' modern Arabic linguistic knowledge. Neuman & Koskinen (1992), Vidal (2011) and Arndt & Woore (2018) in their researches, indicate that video materials can serve as useful input for language learning, especially in vocabulary knowledge. Researchers widely

agree that lexical knowledge is intricate and comprises more than just form–meaning connections. Nation's (1990, 2001) well-known framework of vocabulary knowledge, for example, distinguishes knowledge of spoken and written forms, grammatical function, collocations, meaning, and constraints on word use.

Six students emphasised that their experiences in the discussion environment in the *WhatsApp* group were useful, and it served as an open learning platform. All six students agreed that they preferred studying Arabic linguistic through *WhatsApp* rather than just face-to-face learning in the lecture room. This situation is because some students are passive in the classroom. Also, the *WhatsApp* environment is informal and encourages more interactions. The passive students may benefit from this discussion, as stated by Participant PK11.

*“It is great, Dr. use WhatsApp as a learning medium. All active discussing. Nothing like in class.” (PK4)*

*“I learn a lot of new things today. Thank you for the given materials” (PK11)*

*WhatsApp's* priority as a learning medium, especially for active learning is most optimal when learning focused on meaningful and understandable input diversity. This informal language learning will take place immediately in an active, dynamic social interaction, obtain higher learning outcomes and carry less cognitive load burden (Molinillo et al., 2018; Lantolf, 2000; Almishiki, 2017; Krauskopf et al., 2012; Jeno et al., 2017; Lin & Lin, 2016; Zhonggen et al., 2018). From the perspective of a second language learning hypothesis, if a student is actively engaged in an interaction, they will be more likely to make more excellent development in language learning (Mackey, 1999). Therefore, the role of lecturers is vital to provide explanations while sharing the same learning environment. It is a form of community practice where there is a connection between learning experiences and students feel closer to lecturers who are in their social domain. In other words, both students and teachers gain experience and ability in the same zone, where they meet and thus, developed and enriched together (Mazer et al., 2009).

Qualitative data indirectly confirms the quantitative data as students not only agreeing to the virtual discussion. They also agreed to integrate with the face-to-face learning environment. Face-to-face lessons will help clarify the mistakes that happen in the *WhatsApp* group and compliment the virtual discussion. For example, Participants PK11, PK21, and PK14 stated that the role of the teacher is crucial in the situation of discrepancies among students as well as to encourage discussion to be comprehensive and healthy.

*“A lot of linguistic terms are not known or clear...have to ask and explore on our own...The role of teachers is important in this situation...this is just my opinion...” (PK11)*

“For slide 7, phonetic investigates the sound of language for example, *makhraj* ((places of articulation), *jihaz an nutqi* (pronunciation organs) which is related to the process of how the sound is made. □ يمكن أن تشرح لي يا دكتور (Can **Dr please explain this** “(PK21)

“I tried to understand this video but I am confuse with the pronunciation. □ تعرف معناها (who knows the meaning). Can **Dr please explain this**”. (PK14)

Students have the opportunity to learn in a blended or hybrid learning environment to improve their language knowledge (Garrison & Kanuka, 2004; Bonk & Graham, 2005). In the Malaysian context, students prefer to have blended learning, in which they are exposed to the knowledge, habits and authority of teachers (Alias & Rahman, 2005), either face-to-face or online as suggested by Baran (2010). For example, the role of the lecturer (Py1) helps the discussion converge onto one focal point to "make sure all students take part in the discussion ... need to focus on education issues" (Py1). So for these students, using *WhatsApp* is basically to complement the T&L patterns where there is a change in the role of the teachers, which is now more to facilitating, promoting a pleasant learning environment (Poutanen et al., 2011).

The role of teachers in the group makes language learning more active and more comfortable (Satar & Akcan (2018). Active educators and critical players in the group act as central actors, modelling the necessary behaviours for participation in the online community. However, Szeto (2015) and Pawan et al. (2003) outlined the importance of instructor involvement in encouraging student participation so that teachers do not occupy the discussion space and make students less likely to be more active in the discussion. Students also mentioned the elements of confidence and motivation when engaging in various activities on *WhatsApp*, even though both elements not investigated in this study. Participant PK18, for example, reveals:

“*Tamam Hassan book’s language is high, the content also contains a lot of new things. Discuss in this WhatsApp also can. If this is done individually, It would be more confusing*” (PK18)

The elements of belief, confidence and motivation are essential in encouraging students, especially those involving difficult learning subjects such as the Arabic linguistic courses. Interactions experienced among different levels of knowledge described as neo-internship learning, similar to those suggested by Vygotsky (Gannon-Leary & Fontainha, 2007). This statement shows that students are actively learning in social communities via the media social group, referring to more skilled team members and sharing knowledge and skills with other members (Wenger, 1998; Thai et al., 2018). This practice is encouraged by motivation, which has a strong positive impact on the success of learning in language classes (Gass & Selinker, 2008; Alon & Herath, 2014). It also develops community practices where students with the same learning abilities and learning experience share ideas and feedbacks. For example, Participant PK19 proposes:

*“Maybe can refer to Dr. Tamam’s book, page 52-57....a lot of new things for me, **have to ask lughah members (expert language) in here**” (PK19)*

Interaction with the student community as well as the lecturers in the *WhatsApp* communication environment creates an actively communicative environment. The relaxed atmosphere when interacting and focusing on the social dimensions allow students, especially the ones with the lack of confidence, knowledge and language experience to learn the language aspects through the interactions with the community without feeling ashamed or stressed, but instead, they are more motivated and confident (Gass & Selinker, 2008). Within the environment of *WhatsApp* interaction, students free to manage their learning where they explore and view their online web dictionary, presentation materials and video lessons. This environment may facilitate the learning process through the features provided, including flexibility, interactivity, multimedia use, observing individual differences, multilingual option, and open access to various information (Rahman, 2016; Jakkaew & Hemrungrote 2017; Kumar & Bervell, 2019).

Lecturers only facilitate students' learning and discussion from time to time, and most of the learning takes place through interaction and socialisation outside of the classroom. Such interactions allow students to access a wealth of modern Arabic linguistic knowledge and up-to-date information on current educational studies at both school and university levels (Sulaiman, 2014). This learning concept can increase awareness that language education is capable of forming new thoughts in implementing Arabic language education. In short, *WhatsApp* has embedded language learning, especially with linguistic knowledge, which is proven to be fun for students and enhance their motivation (Northcote & Kendle, 2010).

## CONCLUSION

This study has implications on the three major issues of Arab linguistic learning whereby it can enhance the interactive atmosphere of Arabic linguistic learning, promote linguistic communication, and supporting holistic learning that does not solely focus on structural aspects of theory elaboration alone. This study contributes to the use of model TAM in qualitative studies as the previous study uses this model quantitatively. These may conclude that language learning in Arabic which using a more communication-friendly environment such as the *WhatsApp* application must consider the use of the language, which can be established by engaging competent language users for more efficient language learning.

Blattner and Fiori (2009) also concluded that it is essential for educators to take advantage of technological tools such as existing social media applications to enhance freedom in language education. This new shift allows students to develop their knowledge to become future educators who are more confident. This section will discuss the advantages and disadvantages of this study, together with future research directions.

This study, combining quantitative with qualitative research methods, was adequately designed. The research instruments to collect data were both internally reliable and externally valid. The research procedure was under thorough supervision. The interviews were also steadily recorded and transcribed. Though the findings are found to promote the learning of Arabic linguistic via *WhatsApp* application, there are some limitations and constraints to consider with when conducting this study. In terms of the study period, the study conducted for seven weeks only due to the researchers' concern on the time constraints for students and lecturers to commit in the *WhatsApp* group discussion. A lengthy study period should require more detailed planning.

This seven-weeks study worth of quantitative and qualitative data reflects that *WhatsApp* application can provide an active, communicative learning and meaningful learning context, especially for the less experienced students. The sample of this study consists of new students with diverse background and academic performance. This study needs to replicate in the contexts of other HEIs with higher Arabic language knowledge and skills. This study can be further expanded using a different technology acceptance model other than the TAM model. Future studies can have pre-post, trials or experimental tests. In conclusion, students' attitude is positive towards the use of *WhatsApp* application as an Arabic language learning medium. Therefore, lecturers should be more attentive, prepared and open towards the prospect of teaching using *WhatsApp* in Arabic learning lessons, to be in line with the second core of the Malaysian Higher Education Development Plan 2012-2025 which is to improve the quality of T&L.

### ***Acknowledgments***

First and foremost, I thank the participants of this study. Their contribution was essential for understanding L3 learning processes through social media. We thank the Ministry of Education, Malaysia and the Faculty of Education, Universiti Kebangsaan Malaysia (UKM) under Grant GG2019- 026 for financially supporting this research.

### **REFERENCES**

- Abdullah, R. N., & Azman, M. N. A. (2019). Viral in Social Media: the Viralor and the Viralee. *International Journal of Psychosocial Rehabilitation*, 23(4), 1475-7192.
- Abu Seileek, A. F. (2012). The effect of computer-assisted cooperative learning methods and group size on the EFL learners' achievement in communication skills. *Computers & Education*, 58(1), 231–239.
- Agatha F. Umbit & Muhamad Suhaimi Taat (2016). Faktor-faktor yang mempengaruhi penerimaan E-Pembelajaran dalam kalangan pelajar di institut. *Jurnal Pendidikan IPGK BL*, 13, 1-14.
- Al-Meshal, SA. & al- Jasser, HK. (2017). The impact of social media usability and knowledge collecting on the quality of knowledge transfer: An



- empirical study among Saudi context. *Global Journal of Management and Business Research: E Marketing*, 17 (2), 19-24.
- Almishiki, A. (2017). Using Electronic Classrooms in Training: Experimenting with Google Classroom, Available at :<https://www.mozn.ws/13950/>
- Al Muhsin, M. A., Ahmad, N. Z. (2019). The Emergence of Education 4.0 Trends in Teaching Arabic Islamic Finance Curriculum Design: A Case Study. *International Journal of Psychosocial Rehabilitation*, 23(4), 1475-7192.
- Alqahtani, A. (2019). Usability testing of Google Cloud applications: Students' perspective. *Journal of Technology and Science Education*, 9(3), 326-339. <https://doi.org/10.3926/jotse.585>
- Al-Suwairekh, S. (2001). Vocabulary learning strategies used by AFL (Arabic as a Foreign Language) learners in Saudi Arabia. Thesis PhD, Universiti of Leeds, United Kingdom.
- Alias, A.N. & Rahman, N.S. (2005). The supportive distance learning environment: A study on the-learning support needs of Malaysian online learners. *European Journal of Open, Distance and E-learning*, 2005/II, pp. 1–8. [http://www.eurodl.org/materials/contrib/2005/Alias\\_Rahman.pdf](http://www.eurodl.org/materials/contrib/2005/Alias_Rahman.pdf)
- Alon, I., & Herath, K. (2014). Teaching international business via social media projects. *Journal of Teaching in International Business*, 25(1), 44-59. <https://doi.org/10.1080/08975930.2013.847814>
- Ameri, H., & Asareh, F. (2010). An investigation about language learning problems at elementary levels in bilingual areas of Iran. *Procedia Social and Behavioral Sciences*, 9 (2010), 1757–1761.
- Arndt, H. L., & Woore. R. (2018). Vocabulary learning from watching YouTube videos and reading blog posts. *Language Learning & Technology*, 22(1), 124–142. <https://doi.org/10.125/44660>.
- Ballman, T., Liskin-Gasparro, J. & Mandell. (2001). *The communicative classroom*. Boston: Heinle & Heinle/Thomson Learning.
- Baran, B. (2010). Facebook as a formal instructional environment. *British Journal of Educational Technology*, 41(6), 146-149.
- Bartolotti, J. & Marian, V. (2016). Bilinguals' existing languages benefit vocabulary learning in a third language. *Language Learning*, 67(1), 110-140. doi:10.1111/lang.12200
- Bates, R., & Khasawneh, S. (2007). Self-efficacy and college students' perceptions and use of online learning systems. *Computers in Human Behavior*, 23(1), 175–191.
- Berk, R. A. (2009). Multimedia teaching with video clips: TV, movies, YouTube, and mtvU in the college classroom. *International Journal of Technology in Teaching and Learning*, 5(1), 1–21.
- Blake, R. J. (2008). *Brave new digital classrooms: Technology and foreign language learning*. Washington, DC: Georgetown University Press.
- Blattner, G, & Fiori, M. (2009). Facebook in the language classroom: Promises and possibilities. *International Journal of Instructional Technology and Distance Learning*, 6(1), 17-28.

- Bogdan, R., & Biklen, S. (1992). *Qualitative research for education*. Boston: Allyn & Bacon
- Bonk, C. & Graham, C. (Eds.). (2005). *Handbook of blended learning: Global perspectives, local designs*. San Francisco, CA: Pfeiffer Publishing.
- Buabeng-Andoh, C. (2018). Predicting students' intention to adopt mobile learning. *Journal of Research in Innovative Teaching & Learning*, doi:10.1108/jrit-03-2017-0004
- Cao, X., Guo, X., Vogel, D., & Zhang, X. (2016). Exploring the influence of social media on employee work performance. *Internet Research*, 26(2), 529- 545.
- Carlisle, J. F., Beeman, M. M., Davis, L.H., & Spharim, G. (1999). Relationships of metalinguistic capabilities and reading achievement for children who are becoming bilingual. *Applied Psycholinguistics*, 20, 459-478
- Cenoz, J., Hufeisen, B. & Jessner, U. (2001). Towards trilingual education, *International Journal of Bilingual Education and Bilingualism*. 4 (1).
- Chen, B., Chang, YH., Ouyang, F., & Zhou, W. (2018). Fostering student engagement in online discussion through social learning analytics. *The Internet and Higher Education*, 37, 21-30.
- Creswell, J., & Park, V. (2007). *Designing and conducting mixed methods research*. London, England: Sage Publication.
- Cruse, A. (2011). *Meaning in language: An introduction to semantics and pragmatics*. Oxford: Oxford University Press.
- Das, P., & Mandal, S. (2016). Evaluating the influence of social media on brand sacralization: An empirical study among young online consumers. *South Asian Journal of Global Business Research*, 5(3), 424-446.
- Enayat, M. J., & Amirian, S. M. R. (2016). Vocabulary Levels Test and Word Associates Test: Can they Measure Language Proficiency?. *Asian Journal of Assessment in Teaching and Learning*, 6, 17-26.
- Ewa M. Golonka, Anita R. Bowles, Victor M. Frank, Dorna L. Richardson & Suzanne Freynik (2012) Technologies for foreign language learning: a review of technology types and their effectiveness, *Computer Assisted Language Learning*, 27(1), 70-105, DOI: [10.1080/09588221.2012.700315](https://doi.org/10.1080/09588221.2012.700315)
- Fahrurrozi, A. (2014). Pembelajaran Bahasa Arab: Problematika dan solusinya. *Arabiyat: Jurnal Pendidikan Bahasa Arab dan Kebahasaaraban*, 1 (2), 161-180.
- Falk, Y & Bardel, C (2010) The study of role of the background languages in third language acquisition. *International Review of Applied Linguistics in Language Teaching (IRAL)*, 48(2), 185–220.
- Gamble, C., & Wilkins, M. (2014). Students attitudes and perceptions of using Facebook for language learning. *Dimension*, 49-72.
- Gannon-Leary, P., & Fontainha, E. (2007). Communities of practice and virtual learning communities: Benefits, barriers and success factors. *eLearning Papers*, 5, 1–14.

- Garrison, R., & Kanuka, H. (2004). Blended learning; Uncovering transformative potential in higher education. *Internet & Higher Education*, 7(2), 1-14.
- Gass, S., & Selinker, L. (2008). *Second language acquisition*. New Jersey: Lawrence Erlbaum Associates.
- Gay, L. R., Mills, G. E., & Airasian, P. (2009). *Educational research: Competencies for analysis and applications*. 9<sup>th</sup> edition. New Jersey: Pearson Education Inc.
- Gonzalez Alonso, J. & Rothman, J. (2017). Coming of age in L3 initial stages transfer models: Deriving developmental predictions and looking towards the future. *International Journal of Bilingualism*, 21 (6). pp. 683-697. ISSN 1756-6878  
doi: <https://doi.org/10.1177/1367006916649265> Available at <http://centaur.reading.ac.uk/61776/>
- Gulmez, R. (2012). Foreign language anxiety on the learner of French as a third language in Turkey. *Theory and Practice in Language Studies*, 2(5): 887-894. DOI:10.4304/tpls.2.5.887-894.
- Harun, B., (2018). Arabic novel translation strategies and techniques used among university students. *GEMA Online@Journal of Language Studies*, 17 (4), 225-243.
- Harun, B., & Zawawi. I. (2015). Learning strategies of Arabic language vocabulary for pre university students' in Malaysia. *Asian Social Science*, 11(10), 32-38.
- Hasan, T. (1985). *al-Lughah al-'Arabiyah Ma'nahâ Wa Mabnâha*. 3<sup>rd</sup> edition. Cairo: al-Haiyah Al-Misriyah Al-'Amah Lil-Kitab.
- Hwa, O., & Subramaniam, V. (2017). Faktor timbulnya pengaruh bahasa pertama dalam mempelajari Bahasa Melayu sebagai bahasa kedua. *Ulum Islamiyyah* 20, 34-45.
- Holzinger, Andreas. (2005). Usability engineering methods for software developers. *Communications of the ACM*, 48(1), 71-74.
- Ifinedo, P., Pyke, J & Anwar, A. (2018). Business undergraduates' perceived use outcomes of Moodle in a blended learning environment: The roles of usability factors and external support. *Telematics and Informatics*, 35(1), 93-102. doi:10.1016/j.tele.2017.10.00
- Izani Mistar & Mohamed Amin Embi. (2016). Students' Perception on the Use of WhatsApp as a Learning Tool in ESL Classroom. *Journal of Education and Social Sciences*, 4, 96-104.
- Jabbari, AA. & Salimi, H. (2015). L3 acquisition of simple and present progressive tenses by Iranian EFL learners. *SAGE Open*, 1-9, DOI: 10.1177/2158244015615163
- Jakkaew, P., & Hemrungle, S. (2017). The use of UTAUT2 model for understanding student perceptions using Google classroom: A case study of introduction to information technology course. 2017 International Conference on Digital Arts, Media and Technology (ICDAMT) (205-209). <https://doi.org/10.1109/ICDAMT.2017.7904962>.
- Jeno, L. M., Grytnes, J. A., & Vandvik, V. (2017). The effect of a mobile-application tool on biology students' motivation and achievement in

- species identification: A self-determination theory perspective. *Computers & Education*, 107, 1–1.
- Kataw, Y. (2016). Teaching Arabic as a foreign language: The role of communicative competence, pragmatics, and literacy. Master Thesis, Utah State University.
- Kabilan, M.K., Ahmad, N. & Abidin, M.J.Z. (2010). Facebook: An online environment for learning of English in Higher Education? *The Internet and Higher Education*, 13, 179-187.
- Krauskopf, K., Zahn, C., & Hesse, F.W. (2012). Leveraging the affordances of YouTube: the role of pedagogical knowledge and mental models of technology functions for lesson planning with technology. *Computers & Education*, 58(4), 1194-1206. <https://doi.org/10.1016/j.compedu.2011.12.010>
- Kumar, B.A., & Mohite, P. (2017). Usability of mobile learning applications: A systematic literature review. *Journal of Computers in Education*, 5(1), 1-17. doi: 10.1007/s40692-017-0093-6
- Kumar, J.A., & Bervell, B. (2019). Google Classroom for mobile learning in higher education: Modelling the initial perceptions of students. *Education and Information Technologies*. <https://doi.org/10.1007/s10639-018-09858-z>
- Lai, H.M., & Chen, C.P. (2011). Factors influencing secondary school teachers' adoption of teaching blogs. *Journal of Computers & Education*, 56, 948-960.
- Lantolf, J. P. (2000). Introducing socio-cultural theory. In J. P. Lantolf (Ed.), *Sociocultural theory and second language learning*. (pp. 126). Oxford: Oxford University Press.
- Linamalini, M.N., & Kamarul Shukri, M.T. (2014). Kepelbagaian penggunaan strategi pembelajaran Bahasa Arab (SPBA) dalam kalangan pelajar IPT Kelantan. *The Online Journal of Islamic Education, Special Issue of ICIED 2014*.
- Lin, Y. T., & Lin, Y. C. (2016). Effects of mental process integrated nursing training using mobile device on students' cognitive load, learning attitudes, acceptance, and achievements. *Computers in Human Behavior*, 55, 1213–1221.
- Ma, C. L. (2011). On the application of the standpoint “teaching benefits the teacher and students alike” to SBE translation. *Higher Vocational Education-Journal of Tianjin Professional College*, 20(2), 63–66.
- Mackey, A. (1999). Input, interaction and second language development: An empirical study of question formation in ESL. *Studies in Second Language Acquisition*, 21, 557-587.
- Mayer, R. E. (2002). Multimedia learning. *Psychology of learning and motivation*, 41, 85-139.
- Mazer, J., Murphy, R. & Simons, C. (2009). The effects of teacher self-disclosure via Facebook on teacher credibility. *Learning, Media & Technology*, 34(2), 175-183.
- Mork, C.M. (2009). Using Twitter in EFL education. *The JALT CALL Journal*, 5(3), 41–56.

- Mompean, JA. & Fouz González, J. (2016). Twitter-based EFL pronunciation instruction. *Language Learning & Technology*, 20(1), 166-190.
- Thai, M., Nicola, S. & Cummings, Daniel J. (2018). We're all in this together: The impact of Facebook groups on social connectedness and other outcomes in higher education. *The Internet and Higher Education*, 40, 44-49.
- Mills, N. (2011). Situated learning through social networking communities: The development of joint enterprise, mutual engagement, and a shared repertoire. *Calico Journal*, 28(2), 345-368.
- Molinillo, S., Anaya-Sánchez, R., Aguilar-Illescas, R., & Vallespín-Arán, M. (2018). Social media-based collaborative learning: Exploring antecedents of attitude. *The Internet and Higher Education*, 38, 18-27.
- Nation, I. S. P. (1990). *Teaching and learning vocabulary*. Boston, MA: Heinle.
- Nation, I. S. P. (2001). *Learning vocabulary in another language*. Cambridge, UK: Cambridge University Press.
- Negadi, M N. (2015). Learning English in Algeria through French-based background proficiency. *Procedia - Social and Behavioral Sciences*, 199 ( 2015 ) 496 – 500.
- Neuman, S. B., & Koskinen, P. (1992). Captioned television as comprehensible input: Effects of incidental word learning from context for language minority students. *Reading Research Quarterly*, 27(1), 94–106.
- Nitza, D., & Roman, Y. (2016). WhatsApp messaging: Achievements and success in academia. *International Journal of Higher Education*, 5 (4), 255-261.
- Northcote, M., & Kendle, A. (2001). Informal online networks for learning: Making use of incidental learning through recreation. Paper presented at the International Education Research Conference, December 2–6, Fremantle, Australia
- Ntongieh, N. E. N. A. (2016). ICT and English language teaching and learning in Cameroonian secondary schools. *Global Journal of Human-Social Science: Linguistics and Education*, 16(6), 53–60.
- Omar, A. (2014). Analisis simplikasi nahu Arab menurut Shawqi Daif. Master Thesis, Universiti of Malaya.
- Ooi, Zao May (2017). A systematic functional linguistic investigation into experiential meanings of PETA online news reports. Master Thesis, University of Malaya.
- Pawan, F., Paulus, T. M., Yalcin, S., & Chang, C.-F. (2003). Online learning: Patterns of engagement and interaction among in-service teachers. *Language Learning & Technology*, 7(3), 119–140. <https://dx.doi.org/10125/25217>
- Poutanen, P., Parviainen, O. & Aberg, L. (2011). Conditions for self-organizing and creativity in blended learning environments. *On the Horizon*, 19(4), 286-296.
- Promnitz-Hayashi, L. (2011). A learning success story using Facebook. *Studies in Self-Access Learning Journal*, 2(4), 309-316.

- Puig-Mayenco, E., Gonzalez Alonso, J. & Rothman, J. (2018). A systematic review of transfer studies in third language acquisition. *Second Language Research*.
- Qian, D. D. (2002). Investigating the relationship between vocabulary knowledge and academic reading performance: An assessment perspective. *Language Learning*, 52(3), 16-29.
- Rahimi, N.M., Nor Azhan, N.A, Wan Normeza, W. Z., & Harun, B. (2015). Students' feedback towards using FACEBOOK in learning Arabic language. *Asian Social Science*, 11(28), 170-174.
- Rahman, H. (2016). ICT Integration in Education: Potential and Challenges in IGI Global. In *Human Development and Interaction in the Age of Ubiquitous Technology*, 25-47.
- Richards, J. C. (2015). Technology in language teaching today. *Indonesian Journal of English Language Teaching*, 10(2), 16-29.
- Roshidah Hassan. (2015). Analisis penguasaan bunyi vokal bahasa Perancis oleh pelajar Melayu. *GEMA Online Journal of Language Studies*, 15(3), 99-120.
- Saeheng, P. (2017). A Study of e-Learning, Blended learning, and Traditional Teaching Methods to Motivate Autonomous Learning in English Reading Comprehension of Thais Learners. *Indonesian Journal of English Language Teaching and Applied Linguistics*, 2(1), 1-20.
- Sarrab, M., Elbasir, M., & Alnaeli, S. (2016). Towards a quality model of technical aspects for mobile learning services: An empirical investigation. *Computers in Human Behavior*, 55(PA), 100–112.
- Satar, H. M., & Akcan, S. (2018). Pre-service EFL teachers' online participation, interaction, and social presence. *Language Learning & Technology*, 22(1), 157–183. <https://dx.doi.org/10125/44586>
- Sharma, S.K., & Chandel, J.K. (2013). Technology Acceptance Model for the use of learning through websites among students in Oman. *International Arab Journal e-Technology*, 3(1), 44-49.
- Stanovich, K. E., & Cunningham, A. E. (2004). Inferences from correlational data: Exploring with reading experience. In N. Duke & M. Mallette (Eds.), *Literacy research methodologies* (pp. 28-45). New York: Guilford Press.
- Sulaiman, A. (2014). Assessing Malaysian Gifted Students' Strategies in Language Learning. *Asian Journal of Assessment in Teaching and Learning*, 4, 1-18.
- Sun, J. C. Y., & Rueda, R. (2012). Situational interest, computer self-efficacy and selfregulation: Their impact on student engagement in distance education. *British Journal of Educational Technology*, 43(2), 191–204.
- Szeto, E. (2015). Community of inquiry as an instructional approach: What effects of teaching, social, and cognitive presences are there in blended synchronous learning and teaching? *Computer & Education*, 81, 191–201.
- Tucker, G. R. (1998). A global perspective on multilingualism and multilingual education, In J. Cenoz and F. Genesee (eds). *Beyond Bilingualism:*

- Multilingualism and Multilingual Education (pp. 3-16). Clevedon: Multilingual Matters.
- Tulinayo, Fiona P., Ssentume, P., & Najjuma, R. (2018). Digital technologies in resource constrained higher institutions of learning: A study on students' acceptance and usability. *International Journal of Educational Technology in Higher Education*, 15(36), 1-19.
- VanPatten, B., & Benati, A. G. (2015). *Key terms in second language acquisition* (2nd ed.). London: Bloomsbur.
- Vidal, K. (2011). A comparison of the effects of reading and listening on incidental vocabulary acquisition. *Language Learning*, 61(1), 219–258.
- Wang, LYK., Lew, SL., Lau, SH., & Leow, MC. (2019). Usability factors predicting continuance of intention to use cloud e-learning application. *Heliyon* 5(6), e01788. doi:10.1016/j.heliyon.2019.e01788
- Wenger, E. (2000). Communities of practice and social learning systems. *Organization*, 7(2), 225-246.
- Xodabande, I. (2017). The effectiveness of social media network telegram in teaching English language pronunciation to Iranian EFL learners, *Cogent Education*, 4, 1-14.
- Yang, X., Li, J., & Xing, B. (2018). Behavioral patterns of knowledge construction in online cooperative translation activities. *The Internet and Higher Education*, 36, 13-21.
- Yeboah, J., & Ewur, G. (2014). The impact of WhatsApp Messenger usage on students performance in tertiary institutions in Ghana. *Journal of Education and Practice*, 5,157-164.
- Yunus, M.M., & Salehi, H. (2012). The effectiveness of Facebook groups on teaching and improving writing: Students' perceptions. *J. Educ. Inform. Technol.*, 1(6): 87-96.
- Zahedi, M. (2012). The effect of collaborative learning on Iranian intermediate EFL learners' oral skills and motivation. *Advances in English Linguistics*, 1(3), 56–60.
- Zaidieh, AJY. (2012). The use of social networking in education: Challenges and opportunities. *World of Computer Science and Information Technology Journal (WCSIT)*, 2(1), 18-21.
- Zhonggen, Y., Ying, Z., Zhichun, Y., & Wentao, C. (2018): Student satisfaction, learning outcomes, and cognitive loads with a mobile learning platform, *Computer Assisted Language Learning*, DOI: 10.1080/09588221.2018.1517093