MOOC at Universiti Malaysia Kelantan: Need Analysis Study for the Development of Arabic Language Online Course

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Abstract: *The emergence of Industrial Revolution 4.0, the online learning mode has increasingly been developed and implemented by all higher institution over the world due to their positive impacts on theeducational system. Online learning systems are viewed as apotentially significant platform for learning and teaching process. Massive Open Online Courses (MOOC) has gain attention among educators nowadays. Due to its features,many institutionsas well as in Malaysia started to develop MOOC as learning and teaching platform. Hence, this paper explores the need of Arabic language learners toward using MOOC as a platform for thelearning activity. A set of questionnaire based on students' needs and perceptions was administered to 106 students of Arabic language for anelementary course at Universiti Malaysia Kelantan. The descriptive quantitative analysis was employed to analyze the data by using IBM SPSS statistical software. The results show a positive response in using MOOC as a learning platform due to its flexibility,user-friendly, simplicity, and variousfunctionalities.*

KEYWORDS: *Massive Open Online Courses (MOOC), Online Learning, Arabic Language, Learning Activities, Student'sNeeds*

I. INTRODUCTION

Massive Open Online Courses (MOOC) is one of the most prominent instructional delivery toolsfor education. The emergence of new information and communication technologies has paved the way for educators to create a groundbreaking online learning environment that enhances the entire teaching and learning process (Jen Her Wu, Robert D. Tennyson, Tzyh Lih Hsia, 2010). MOOCs contain online courses that can be accessed through the web and offer unlimited entries. According to G. James Mozoue(2014), it presents a model for delivering online learning content to anyone who wants to attend a course, with no restriction on attendance. MOOC combines both traditional and modern course materials for learning such as videos, reading, projects, assignments and more.

Additionally, students can participate in interactive user forums provided by MOOCs and this interactive forum helps build communities for students, lecturers, professors, teachers and all users. MOOC is still very new development which has just begin to evolve in 2012. Some early MOOCs emphasize open features and open licensing of content, structure and learning goals the features are to promote the reuse and diversity of resources. However, some of the newer MOOCs use closed licenses for their course material but still maintain free access to users from around the world.

Another interesting point about MOOCs is that it does not require formal qualification and no entry requirements. However, courses offered are recognized internationally as most of these courses areoffered by universities and notable institutions from around the world such as Harvard, Yale and Stanford and other leading universities in the US, UK, Europe and Asia and all materials are provided by the universities and institutions. Lastly, the courses offered by MOOCs are mostly accessible through computers, mobile phones, tablets and other devices which will make the learning process more fun as students can learn anytime and anywhere as it does not require them to be in a specific place to learn.

Universiti Malaysia Kelantan (UMK) is one of the public universities in Malaysia that is involved in MOOC development as recommended by the Ministry of Higher Education. The development of MOOC is one of the initiatives to support the policyof Redesigning Malaysian Higher Education in 2017. The MOOCs Development in UMK has been increasingly being welcomed by lecturers and facultiesat the beginning of 2017 with an increased number of MOOC courses offered. All MOOCs are now available at https://www.openlearning.com/umk and could be accessed by everyone.

II.   The Development of e-learning in Teaching and learningof the Arabic Language

The online learning system has been used since several years ago and hasbecome a commonmedium for conducting teaching and learning process in universities. In this regard, the emergence of new technologies in the education system has surpassed beyondweb-based learning as Learning Management system, Online learning, Augmented Reality are gradually replacing the conventional teaching approach. The use of technologyis becoming one of the most important tools for thedelivery content of teaching and learning is growing rapidly worldwide. E-learning makes the learning process much easier and flexible, and at the same time, it is more feasible for universities to cater for all groups of students.

Meanwhile, Language is a medium between mind and learning as ineffective language distorts ideas (Orwell's, 2007). Hence, learning a foreign language like Arabicrequires a strategy that can boost the teaching and learning process. The processes in teaching and learning Arabic need to be more integrated and more interactive and e-learning isan effectivestrategythat can be employed to learn languages.

Over the last few years, the advent of theinternet with higher capabilities has impacted the education field, especially in language learning.The rapid growth of technology drives innovation in online learning. Some of the devices used in online learning are servers, laptops, tablet, computers, smartphones, PDAs, MP3/MP4 players, handheld gaming devices, mini notebooks or netbooks and others (Hashemi M., 2011). The effectiveness of using multimedia and web-based learning in learning Arabic has been proven byMohammad Taufiq& Wan Ab Aziz (2016)which found that web-based learning has a significant contribution in motivating students to learn Arabic by acquiring vocabulary, improving language skills and gaining information, especially in a foreign environment. The effectiveness of website can be measured in terms of its ability to elaborate upon language skills taught in a classroom. Besides that, there are several studies have been conducted in developing technologies toward teaching and learning Arabic in Malaysia as well. Another exampleof web-based learning is the Learning Management System (LMS) that uses the Moodle platform medium to develop tools for online learning process and that provide instructors with a way to create and deliver content, to monitor student participation and engagement, and to assess student performance online (Lonchner, B., Conrad, R. & Graham, E, 2015). On the other hand, despite the development of e-learning, there are some grievances that need to be addressed, especially in the development of learning platforms for Arabic language learners. In recent years, there is an increasing amount of literature and studies on using of multimedia elements in teaching and learning Arabic, like what discussed in the worksof MohammadSabriSahriret. al(2012), Sharifah(2013), Nurkhamimi(2014), AmaniNawi(2014) and Karkar(2015).

In the meantime, many institutions of higher education in Malaysia have adopted LMS as a platform for learning and teaching. A study done by Wan Ab Aziz & Mohammad Taufiq Abdul Ghani (2017)explored the acceptance of Schoology as an online Learning Management System based on Technology Acceptance Model (TAM). Overall findings of the study show positive feedback among students to learn via learning management system as it contributesmany positive impacts and advantages among students such as improve academic productivity and achievement, accomplish atask quickly, and accessible even outside classroom wall.

Massive Open Online Courses (MOOCs) have been one of the most trend technology used by the educator nowadays. A MOOC is different from other web-based learning systemsas the online course provided is more accessible toa large number of students, up to thousands of students per course (Siemens, 2013). Due to the high number of students, the learning process of aMOOCdiffers from web-based learning or LMS as students enrolled in MOOC are more independent. Furthermore, the MOOCs are not only open to university students, but also the members of the public regardless of their qualifications.

III. Research objectives

The main objective of this study is to developMassive Open Online Courses for Arabic Language targetedfor UMK students using ADDIE instructional design model. This endeavour entails executing the objectives in stages as stated below:

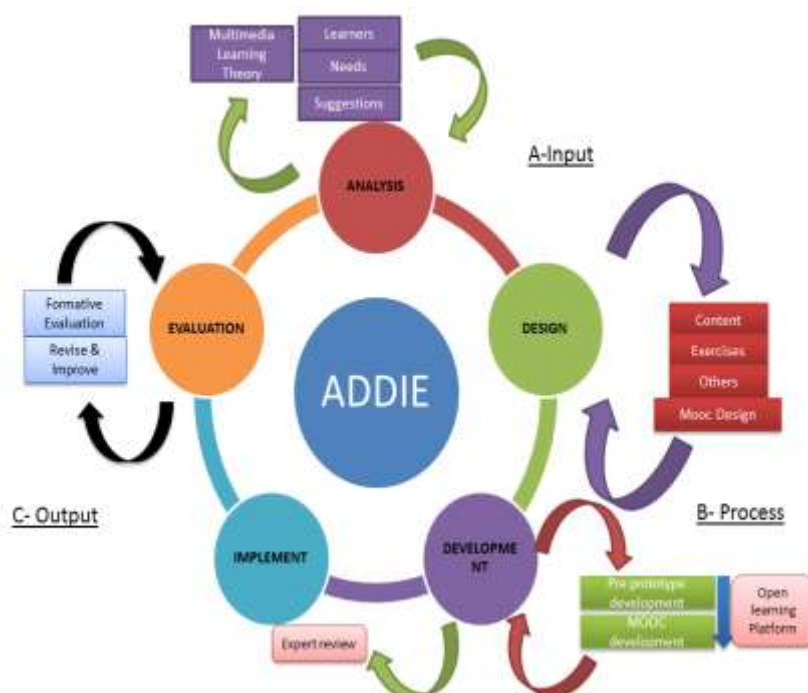| Stages	Sample Task	Sample Output
Analysis: The process of defining what is to be learned.	o Need assessment o Problem identification o Task analysis	o Learner profile o Description of constraints o Needs, Problem statement o Task analysis
Design: The process of specifying how it is to be learned.	o Write objectives o Develop test items o Plan instruction o Identify resources	o Measurable objective o Instructional strategy o Prototype specification
Development: The process of authoring and producing the materials.	o Work with producers	o Storyboard o Script o Exercises
Implementation: The process of installing the project in the real world context.	o Teacher training o Tryout	o Students comments, data
Evaluation: The process of determining the adequacy of the instruction.	o Record time data o Interpret test result o Survey o Revise activities	o Recommendation o Project report o Revised prototype

Figure 1: ADDIE Instructional Design Model

IV. Methodology

Based on theproposedmodel, a five-pointLikert scale questionnaire was usedto measure student perceptions of MOOCs developmentfor learning theArabic language. The questionnaire consisted of three parts, part A, part B and part C. The part A was to elicit the respondents' demographic details whereas the part B was to elicit technologies tools used by the respondents and part C was to elicit respondent's perceptions toward the developments of aMOOC in term of features, contents,and interface. The questionnaires were distributed to 106 respondents in UMK3 Campuses Jeli, Bachok and PengkalanChepa. The descriptive quantitative analysis was employed to analyze the data collected by using IBM SPSS statistical software.

V. Results and Findings

The main purpose of this study is to analyze the leaner's need for learning theArabic language via Massive Open Online Courses (MOOC) at Universiti Malaysia Kelantan. The descriptive quantitative data collection procedures were conducted during the period of this study. Therefore, the findings are reported in three main categories, which are demographic information, need analysis and students' suggestion for the development of MOOC. The details are tabulated as follows:

V.I DEMOGRAPHIC BACKGROUND

Table 1: Demographic Background

Demographic Background		Frequency (N)	Percentage (%)
1. **Gender**	Male	13	12.3
	Female	93	87.7
2. **Major of Study**	Applied Sciences	66	62.2
	Business	27	25.4
	Creative Technology	13	12.4
3. **Year of study**	1st year	6	5.6
	2nd year	94	88.6
	3rd year	3	2.9
	4th year	3	2.9
4. **Mother Tongue**	Malay	106	100
	Mandarin	0	0
	Tamil	0	0
	Arabic	0	0
5. **Arabic Language Background**	Yes	50	47
	No	56	53

106 students responded to the questionnaire. (87.7 %) of them are female respondents and the rest (12.3%) are malerespondents. The majority of them are studying in the field of Applied Sciences with (62.2%), followed by Business (25.4%) and Creative Technology (12.4%). In terms of their year of study, themajority of them are coming from second-year students with the percentage of (88.6%), followed by thefirst-year students with (5.6%) and third and fourth-year students with (2.9%) respectively. All of the students are Malay and their first language is Malay language. (53%) of the students do not have any Arabic language background before enrolling inUniversiti Malaysia Kelantan and (47%) of the students have learned Arabic as a subject at secondary school.

V.II NEED ANALYSIS

V.II.I Device Ownership

Table 2: Device Type

Device Ownership	Percentage (%)
Laptop	17
iPad	19.8
Tablet	0
Smartphone	63.2

The table above illustrated that (63.2%) of students usesmartphones as themain device for accessing the internet, followed by (19.8%)who use iPad and (17%)who use laptops. The high ownership rate ofsmartphones can be attributed to thelower price of a smartphone compared to other devices.

V.II.II Internet Accessibility

Table 3: Internet Accessibility

Internet Accessibility	Percentage (%)
Campus Wi-Fi	93.4
Broadband (3G/LTE)	5.7
Free Hotspot	0
Streamyx	0
High-speed broadband	0
YES 4G	0.9

The results tabulated in the table aboveshow that the most commonmethod used to access the internet is through Campus Wi-Fi facility with the highest percentage of (93.4%) followed by broadband with (5.7%) and the least is through YES 4G with the percentage of (0.9%). Many use the on-campusWi-Fidue to its excellent connection on campus. Besides that, the campus Wi-Fi is free of charge and has an unlimited quota which allows them to download and upload anything. The other of internet accessibilities have low preferable by students due to thehigh price ofinternet packages and limited quota offered.

V.II.III Reason for Having Device

Table 4: Reason for Having Device

Reason for Having Device	Percentage (%)
Communication	55.7
Education	33
Entertainment	4.7
Collaboration	1.9
Business	3.7
Others	1

The students were also asked on the reason for them to purchase amobile device. The table above shows that the majority of students use their mobile devices for Communication with (55.7%). This isfollowed by Education with (33%), (4.7%) forEntertainment and (3.7%)for business purposes.   Collaboration and other reasons scored the lowest. This finding clearly showsthe students do not merely use the devices for communication and education, but also for business and entertainment, but the students rarely use their mobile devices for collaboration purpose.

V.II.IV Students' Need for Learning Arabic

Table 5: Students' Need learning forArabic

Student's Needs	Least (%)	Less (%)	Average (%)	More (%)	Most (%)
Simple greeting word.	0	5.6	29.2	23.5	41.7
Arabic language terminologies.	1.9	4.7	25.4	34	34
Basic conversation.	3.8	1.9	29.2	25.4	39.7
Arab culture.	1.8	7.5	26.4	25.4	38.9
Basic Arabic grammar.	4.7	12.2	23.5	27.3	32.3

Based on the table above, it is clear that thestudents have several needs in learning theArabic language via MOOC. Most of thestudents(41.7%), think that they need to learnsimple greeting wordsfollowed by learning Arabic terminologies (34%)and basic conversation in daily life with(39.7%) so they can learn and practice the language easily. The studentsalso think they need to learn Arab culture in (38.9%) while (32.3%) of them think that theknowledge of basic Arabic grammar is a crucial element that needs to be added in the Arabic language MOOC.

V.II.V Language Skills Preferences

Table 6: Language Skills Preferences

Language Skills	Least (%)	Less (%)	Average (%)	More (%)	Most (%)
Reading	0	2.8	18.8	34	44.4
Writing	1.8	7.5	21.6	33	36.1
Speaking	1.8	3.7	21.7	27.3	45.5
Listening	1.8	3.7	34.9	33	26.6

The students are also asked aboutthe language skills they prefer. The majority of students prefer to learn the speaking skills with the highest percentage of (45.5%) followed by reading skill with (44.4%). Writing skill and listening skill obtained (36.1%) and (26.6%) respectively. The finding disclosed the importance of speaking skill among students as it could be value added to them for career development by acquiring theArabic language as a foreign language.

V.II.VI Language Sub-skill Preferences

Table 7: Reading Sub-skill

Sub-skill Items	Least (%)	Less (%)	Average (%)	More (%)	Most (%)
Ability to skim and scan the text.	1.8	6.6	34	35	22.6
Ability to interpret graphs.	3.7	6.6	37.7	31.1	20.9
Ability to get the meaning from context.	1.8	4.7	35	28.3	30.2
Ability to understand synonym and antonym.	2.8	4.7	34	28.3	30.2
Ability to infer conclusion.	3.7	4.7	36.8	31.1	23.7
Ability to evaluate text.	2.8	6.6	35	31.1	24.5

The results tabulated in the table above show the students' preference ofreading sub-skills preferences. The majority of students preferto gain the ability to understand the meaning from context and its synonym and antonym with (30.2%). Besides that, (24.5%) of them prefer to have the ability to evaluate the text(23.7%) of

them prefer learning how to infer the conclusion while reading a text and (22.6%) of students would like to acquire skimming and scanning skills so they canderive main pointsfrom the text easily.

V.II.VII Language Sub-skills Preferences

Table 8: Writing Sub-skill Preferences

Sub-skill Items	Least (%)	Less (%)	Average (%)	More (%)	Most (%)
Ability to write sentences.	2.8	7.5	37.7	25.4	26.6
Ability to sequence idea.	2.8	9.4	34	28.3	25.5
Ability to use proper grammar.	1	10.3	32	28.3	28.4
Ability to use punctuation.	1	9.4	34	29.2	26.4

The survey results in the table above indicated that (28.4%) of the students preferred to use a proper grammar in their writing skill followed by the ability to write sentences with (26.6%) and using the correct punctuation (26.4%). Moreover, (25.5%) of the students arekeen to acquire the ability to sequence the idea when writing reports or assignments.

V.II.VIII Language Sub-skill Preferences

Table 9: Speaking Sub-skills Preferences

Sub-skill Items	Least (%)	Less (%)	Average (%)	More (%)	Most (%)
Ability to interact in a social conversation.	4.7	5.7	31.1	32	26.5
Ability to give instruction.	3.8	7.5	35	28.3	25.4
Ability to describe objects.	1.8	7.5	29.2	31.1	30.4
Ability to pass information.	3.7	6.6	31.1	32	26.6
Ability to speak clearly.	4.7	7.5	32	26.4	29.4
Ability to ask information	2.8	8.5	30.1	32	26.6
Ability to give suggestion.	5.6	6.6	31.1	32	22.6

The students were also asked about their preferred speaking sub-skills. The results illustrated that (30.4%) of students preferred to learn how to describe object, pictures,and people with the appropriate vocabulary. They prefer to learn how to speak clearly with the percentage of (29.4%). The breakdown of the other sub-skills are as follows, interact in a social conversation with the percentage of (26.5%), ability to give instruction (25.4%), ability to pass and ask information (26.6%) and (22.6%) for the ability to give suggestions. These findings emphasize the students' needs and can be used in developing a module for writing.

V.II.VIIII Language Sub-skill Preferences

Table 10: Listening Sub-skill Preferences

Sub-skill Items	Least (%)	Less (%)	Average (%)	More (%)	Most (%)
Ability to understand lecture.	1	4.7	34	36	24.3
Ability to understand speakers' intention.	3.8	7.5	30	35	23.7
Ability to understand classroom discussion.	0	8.5	29.2	34	28.3
Ability to understand questions.	1	7.5	29.2	31.1	31.2

The table above indicates the listening sub-skill preferences. The majority of the students (31.2%) prefer to acquire the ability to understand questions followed by the ability to understand classroom discussion with (28.3%) while (24.3%) agreed to understand lecture and (23.7%) agreed to understand speaker's intention. The results showed that most of the students think that learning should impart an understanding of thequestions in order to create a meaningful learning and teaching experience.

V.III. STUDENTS' PREFERENCES AND SUGGESTIONS

V.III. I Delivery and User Interface Preference

Table 11: Delivery and User Interface Preference

Elements	Least (%)	Less (%)	Average (%)	More (%)	Most (%)
Main Interface	1	3.7	41.5	35	18.8
Text	1.8	1.8	38.7	37.7	20
Pictures	1	1.8	25.4	34	37.8
Exercise	1	2.8	30.1	35	31.1
Game	4.7	1.8	26.4	30.1	35.8
Vocabulary List	1	1.8	30.1	30.1	37
Video	0	1.8	2.8	36.8	32

The students were also asked to select the elements they think included in theMOOCand its user interface design. These include multimedia elements such as text, pictures and videos, the delivery contents, and main menu design. According to the table, most respondents prefer to have multimedia elements embedded in the MOO. (37.8%) of them prefer to use pictures, (20%) of them prefer to use texts, and (32%) prefer to have videos. This result showed that the multimedia element could affect students need as well as their achievement and motivation in learning the Arabic language via MOOC. In the meantime, (35.8%) of the students suggest including educational games in MOOC as it can help increase vocabulary acquisition in a fun, interesting way.

V.III. II Suggestion and Comments in Developing MOOC for Arabic Course

Students were also asked to give comments and suggestions on how to develop theprocesses for MOOC in learning Arabic. The results are as follows:

Table 12: Student's Comments and Suggestions

Main Category	Comments and Suggestions
Learning Content	✓ Basic Arabic grammar. ✓ Emphasize on language skill s, rather than grammatical errors. ✓ Simple phrases. ✓ More vocabulary provided. ✓ Add more exercises and quiz in every chapter. ✓ Provide meaning in Bahasa Melayu. ✓ Use of anime and cartoon character. ✓ Adding interactive games.
User Interface	✓ The use animation. ✓ High-quality multimedia elements such as picture, sound, and video. ✓ Colorful; make it more interesting. ✓ Simple and user-friendly.
System	✓ Upgrade the system. ✓ Improve wifi connection. ✓ Facilitating asmooth transition from one page to another .

VI.   Discussion

Building a bridge between technological innovation and user's satisfaction is crucial to ensure the use of the tool could encourage learning attainment, engagement, and motivation(Lee, 2012). The current study has collected data from students who are taking Arabic course regarding on the type of device they use, internet accessibility, and their needs in learning theArabic language. They have also shared their language needs and suggested features that can be included in the process of developing MOOC for learning theArabic language.

Meanwhile, an iterative ADDIE model was used for the development of MOOC. The results and finding of this study will employ for the next phase, design and development phase. Several elements will be considered to be added in the MOOC as needed by students. These crucial elements should be taking over carefully as it will contribute to a meaningful learning process. The content of the MOOC will be designed by anexpert to meet the student's needs toachieve learning objective and acquire excellent proficiency in the Arabic language.

VII.   Conclusion

The study attempts to develop a MOOC for Arabic language course at UMK andthis paper presents the results and finding of need analysis study among students for the development of the MOOC in terms of their background, devices, language need, and suggestions. The implication of the findings suggests that the MOOC can be developed by providing interactive learning contents, exercises,and tests in the form of language games, high-qualitymultimedia elements and user-friendly interface. Moreover, with regards to the future direction, it would be interesting to investigate the effectiveness of MOOC whether it could enhance or disrupt thelearning process.

VIII.   Acknowledgement

References

[1.] (2014). Retrieved from https://library.educause.edu/topics/teaching-and-learning/massive-open-online-course-mooc

[2.] Abdelghani Karkar, Jihad Mohamad Alja'am, Mohamad Eid, Andrei Sleptchenko. (2015). E-LEARNING MOBILE APPLICATION FOR ARABIC LEARNERS. *Journal of Educational & Instructional Studies in the World, Volume 5, Issue 2* .

[3.] Hashemi M., A. M. (2011). What is Mobile Learning? Challenges and Capabilities. . *Procedia - Social and Behavioral Sciences,* , 2477-2481.

[4.] Jamel, S. F. (2013). *Penggunaan Multimedia Dalam Pengajaran Bahasa Arab: Satu Kajian Kes..* Kuala Lumpur: Tesis diserahkan untuk memenuhi keperluan bagi Ijazah Doktor Falsafah. Universiti Malaya.

[5.] Jen Her Wu, Robert D. Tennyson, Tzyh Lih Hsia. (2010). A study of student satisfaction in a blended e-learning system environment. *Computers and Educations, 55* , 155-164.

[6.] Lee, J. (2012). Adaptive Courseware Using Kolb's Learning Style. *International Magazine on Advances in Computer Science and Telecommunications, 1*, 45-49.

[7.] Lonchner, B., Conrad, R. & Graham, E. (2015). Secondary Teachers' Concerns in Adopting Management Systems. *TechTrends: Linking Research & Practice To Improve Learning* , 62 - 70.

[8.] Mohamad Sabri Sahrir, Mohd Firdaus Yahaya, Mohd Shahrizal Nasir. (2012). EZ-Arabic for Children: A Virtual Learning Resource Tool for Malaysian Primary Schools. *Procedia - Social and Behavioral Sciences.*

[9.] Mohammad taufiq Abdul Ghani, Wan Ab Aziz Bin Wan Daud, Mohamad Sabri Sahrir. (2016). Employing Websites in Language Learning for Tourism purpose Among Arabic Learners at MARA Poly-tech College (KPTM). In J. S. Johan Eddy Luaran, *Envisioning The future of Online Learning* (pp. 23-30). Singapore: Springer.

[10.] Mozoue, G. J. (2014). The MOOC Model: Challenging Traditional Education. *educause review online* , 1-9.

[11.] Nawi, A. (2014). *. Design of computer modules for idioms in Arabic: students of the International Islamic University Malaysia.* Kuala Lumpur: Thesis PHD Dissertation IIUM.

[12.] Orwell's, G. (2007, march 21). *5 Rules for Effective Writing Pick The Brain, Grow Yourself,* . Retrieved January 15, 2018, from http://www.pickthebrain.com/blog/george-orwells-5-rules-for-effective-writing/

[13.] Rias, N. B. (2012). (2012). M-Jako Iban: A Mobile Application to Introduce Iban Language. *International Symposium on Humanities, Science and Engineering (SHUSER 2012),* . Kuala Lumpur.

[14.] Siemens, G. (2013). Massive Open Online Courses: nInnovation in education. *Unesco* , 268.

[15.] Wan Ab Aziz Wan Daud, Mohamad Taufiq Abdul Ghani. (2017). THE ACCEPTANCE OF SCHOOLOGY AMONG EARLY CHILDHOOD EDUCATION STUDENT AT MARA POLY-TECH COLLEGE (KPTM). *Journal of Global Business and Social Entrepreneurship (GBSE), Vol , Issue 6* , 133-142.

[16.] Zainuddin, N. (2014). *design, implementation, and evaluation procedures for developing multimedia for teaching Arabic vocabulary for non-Arabic students at the beginner's level by using one of the applications available on the Internet namely, Moodle.* Kuala Lumpur: Thesis disertation IIUM.