

A Conceptual Framework for Mobile Application in Learning Arabic Language Proficiency

Wan Ab Aziz Wan Daud*

Universiti Malaysia Kelantan, Kelantan, Malaysia

Wong Kung Teck

Universiti Pendidikan Sultan Idris, Perak, Malaysia

Mohammad Taufiq Abdul Ghani

Universiti Pendidikan Sultan Idris, Perak, Malaysia

Abstract

Over the years, there are rapid development in complex devices and gadgets such as smartphones, tablets, PCs and laptops. Consequently, this leads to rapid development in mobile technology that has made us reliant to mobile applications in our lives. Mobile applications are becoming popular tools for education and business, as well as for entertainment and employment. This has sparked the development of innovative and interactive education applications that can be used to encourage and facilitate conducive learning. Therefore, this research is conducted to create a further understanding on the use of mobile applications to enhance learning. Here, it is believed that the use of mobile applications in education have many benefits. This is because applications enable students to visualize what being learned throughout their learning process which makes learning more effective for them. This study describes the use of an instructional design model to design and develop an application for learning Arabic language and improve its proficiency. The use of the combination of Kemp model and Gerlach & Ely model is proposed in developing the application.

Keywords: Arabic language; Language proficiency; Instructional design model; Mobile apps learning; Conceptual framework.



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1. Introduction

Developing proficiency is the most integral, yet challenging part in second language learning. In this regard, studies like (Lenneberg, 1967) have posited that proficiency development is the result of a neurologically-based phenomenon. On the other hand, other research like Taylor (1974) argued that there is no cognitive reason for justifying that children are better than adults in learning language while Upshur (1968) and Spolsky (1969) supported the notion that adult second language learners are also able to reach native-like proficiency in the target language.

In recent years, there is a substantial attention on the teaching and learning of Arabic language, especially among learners from non-native backgrounds. There are also numerous studies on improving the quality of Arabic language teaching and learning based on students' sociocultural and sociolinguistic background and the rapidly changing learning environment. These studies have transformed the teaching and learning practices of Arabic Language to put it in a better direction. This is also evident in Malaysia that has been a positive development in the teaching and learning of Arabic since its independence in 1956. In this regard, the teaching of Arabic started in the 18th century through madrasah institutions and religious hut schools (Abdullah and Kierszenbaum, 1989). Over the years, the practice has grown rapidly (Mohd *et al.*, 2015). One of the most prominent developments is the implementation of the J-QAF (Jawi, Quran, Arabic and Fardu Ain) program where Arabic is taught as an additional language in all primary schools in Malaysia. Many Malaysian public institutions of higher learning (IPTAs) including University of Malaya (UM), International Islamic University of Malaysia (UIAM), Universiti Sains Islam Malaysia (USIM) Sultan Zainal Abidin (UniSZA), Universiti Teknologi MARA (UiTM) and Universiti Pendidikan Sultan Idris (UPSI) also offer Arabic courses in different level of learning. On the other hand, despite the rapid development of Arabic teaching and learning in both elementary and tertiary education, there are still issues on the level of proficiency, the language skills which form the basis of language teaching and learning, as well as the use of materials such as books, modules, and notes for teaching and learning. In this light, numerous studies, such as by Azhari (2005), Zawawi *et al.* (2011); Ibtisam and Zamri (2012); Ismail *et al.* (2013) have discussed the importance of focusing on language skills to improve the Arabic language teaching and learning.

In the meantime, smartphones is an important device in our everyday lives, and at times, the real-time notifications on messages and news we receive from it can be disruptive. Furthermore, the welcoming pixelated glow of the smartphones often distracts us from our everyday tasks. In recent years, experts have warned the public over the looming risk of internet addiction, particularly the over-use of social media sites like Facebook, Twitter and Instagram. However, despite the risk, these sites can become a tool for studying languages like Arabic. Dong and Liu

(2013) mentioned that having a learning tool is essential in a language course because it can help students to develop language skills.

Teachers can use a range of smartphone applications to facilitate Language learning. Applications are software that can run through a browser as well as mobile devices such as computers, phones and tablets. Many applications can be accessed with or without an internet connection. Due to their flexibility, applications have been used extensively in different fields, including in education where there are many applications designed for educational or training purposes. In this context, of applications can help decimate and visualize knowledge, which is important in teaching and learning. Educational applications include word processing software as well as multimedia tools that allow learners to use and create electronic media like photo and music as part of their learning experiences. The increasing use of applications in education has driven the popularity of tablet-type devices as a learning tool in classrooms devices (Shimizu and Ogawa, 2014).

On the other hand, according to Ng *et al.* (2015), self-learning among beginner foreign language learners is challenging. This is because they are to their defenses as there are less contact with a teacher who can give guidance and feedback to them to improve their language. Moreover, beginner learners might not have the knowledge on basic Arabic skills such as phonology, Arabic letters and pronunciation. In this regard, beginner learners could be lost and have no idea on what and how they should learn. As a result, independent learning might not be ideal for beginner learners as it might hinder teaching and learning and limit its effectiveness. At the same time, the lack of Arabic language tools make it difficult of learners to do revision on their own, particularly skills related to speaking and pronunciation. Based on the above discussion, a multimedia, interactive application called 'i-Almunawwar' to help students understand Arabic through a combination of multimedia elements was developed using HTML 5. This application helps students to do their revisions anytime to ease the teaching and learning process and making it more practical.

1.1. Mobile Applications Learning

Mobile learning, including through mobile phone applications have become significantly important in the field of education. Consequently, educators are actively engaged in facilitating mobile learning which involves developing or designing of mobile phone applications. Simanshu *et al.* (2013) claimed that despite the rapid development of mobile learning, the design and development of mobile applications will continue to be a major challenge as educators gradually adopt branded mobile applications (branded applications) in the coming years. Meanwhile, past studies advocated that extensive use of mobile devices in education increases interactivity in learner. Moreover, there are claims like working with mobile devices like a tablet is easier working with a PC. This has driven the popularity of tablet-type devices as a learning tool in classrooms (Shimizu and Ogawa, 2014).

In this modern age, the adaption of technology in education is inevitable. Hence, educator's especially Arabic language teachers should take advantage of this and change from traditional to modern methods. They should utilize modern technology, such as Internet-based learning (Ali, 2008); internet-based learning provides a new learning format by using remote internet technologies to provide learning materials and facilitate the communications. The use of internet resources can also increase motivation as they offer attractive and fascinating learning experiences and enable learners to use and produce forms of media. Jennifer Lin further explained that Web learning makes it easier for teacher and learner s access materials and contents. It also helps facilitate communication between parties involved in the educational process (Ali, 2008).

In this regard, there are many educational applications available in the market. This is evident from the Apple App store for iOS and Android play store that contain a huge amount of educational software for preschoolers and elementary school. However, some educational applications may not meet the local educational principles and many test applications contain ill-defined distracters. This makes it necessary to adapt learning materials for mobile devices. These considerations could bring improvement for learning and teaching in all levels of education.

In the context of this study, an educational mobile application has been developed by the Department of Informatics and computers. The lab has previously developed mobile applications for the iOS, Android and MS Windows operating systems and generated three types of educational applications, which are educational applications for elementary and high school students, applications for teachers and educational applications for special purposes. Here, researchers have worked with the lab to develop an application to learn Arab as a second language.

1.2. Instructional Design Model for Mobile Applications in Learning Arabic Proficiency

The Morrison, Ross and Kemp models are collectively known as the Kemp Model. The model describes different elements of instruction design, instead of 'steps, levels, levels or sequences' (Kemp, Morrison & Ross, 2004). This model emphasizes on the implementation and continuous assessment throughout the instruction design process. The Kemp Model contains nine important elements which form the structure for a continuous cycle of the design. All the elements involved are free and independent of each other. They are not linear and there is no start or end point. The oval shape of this model illustrates that the design and development process is a recurring cycle that requires planning, design, constant development and evaluation to ensure the effectiveness of the instruction.

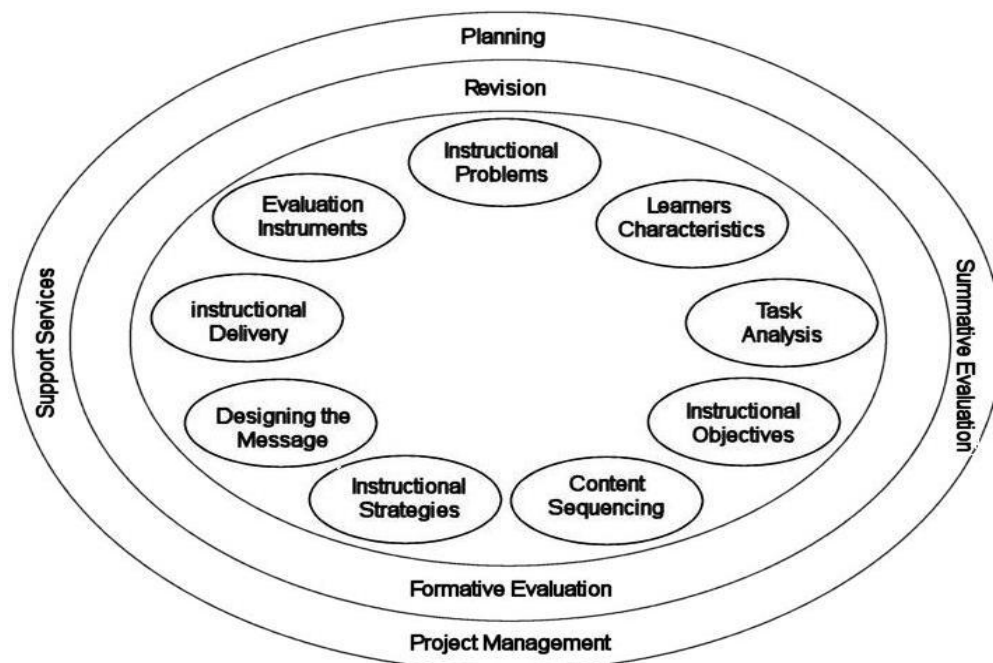
Another model by Gerlach and Ely (1980) is also suitable for beginner designers with the knowledge and expertise in a particular field. This model lays down the strategies for selecting and using media in learning and the allocation of learning resources. This model template starts with content identification and objectives that lead to behavioral judgment comprising of strategy determination, group organization, time and place allocation and resource selection. This model also focuses on achievement assessment and feedback analysis.

In this study, both the Kemp's Model and Gerlach & Ely Model are integrated to construct an Arabic language application (Azahari *et al.*, 2018). This non-linear cycle has no starting and ending point and may start at any related elements. These models are almost similar as both are classroom-oriented and have their own advantages and disadvantages. In this regard, the Kemp model provides a basic framework for the module construction process. Hence, the Gerlach & Ely model is integrated to replace some elements in the Kemp Model as the steps are more detailed. Consequently, these models are modified and combined to form the KemGerly Model to fit the context of this study.

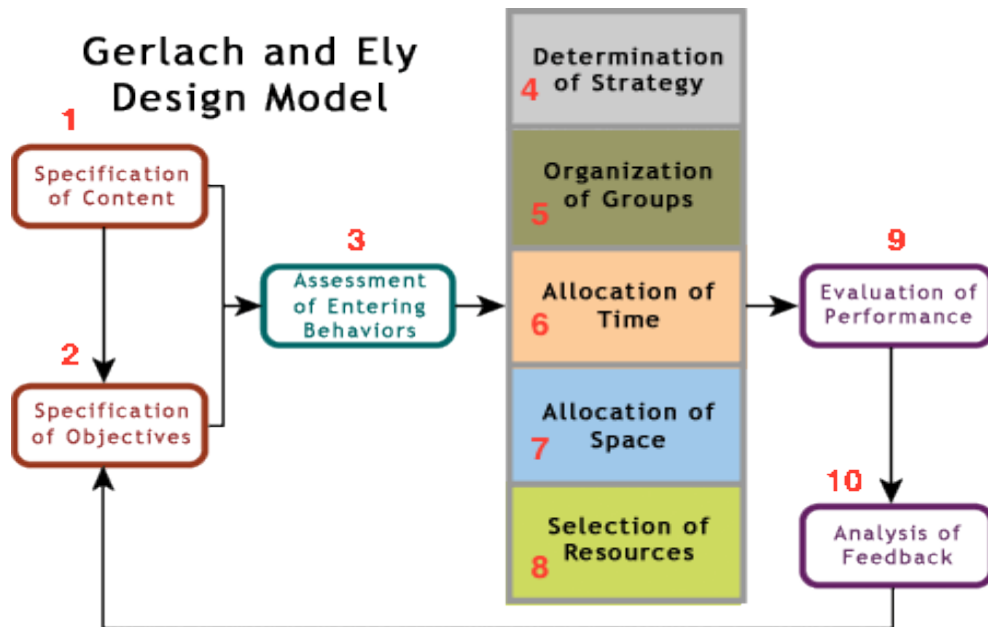
The figure below illustrates the conceptual research framework used in designing and developing the mobile application prototype. The researcher has systematically followed the step by step guidelines in every phase to develop a prototype of the application. The instructional design process generally starts with a series of analyses, needs analysis, task analysis, and instruction analysis. Therefore, the Kemp Model will be adopted in the analysis phase to identify issues faced in the instruction and setting the objective to design an instructional program. Next, the researcher will examine students' characteristics and background before identifying the tasks, setting learning objectives, planning the learning content, and designing the learning strategy. These elements will be reinstated based on the explicit steps (Gerlach and Ely, 1980).

Following the groundwork, the researcher will identify the learning message and the medium of delivery to design the assessment instrument that could evaluate the objectives. This would help in deciding the source to support teaching and learning activities. These implementation elements will help the process of designing a multimedia learning tool based on the Constructivism Learning Theory.

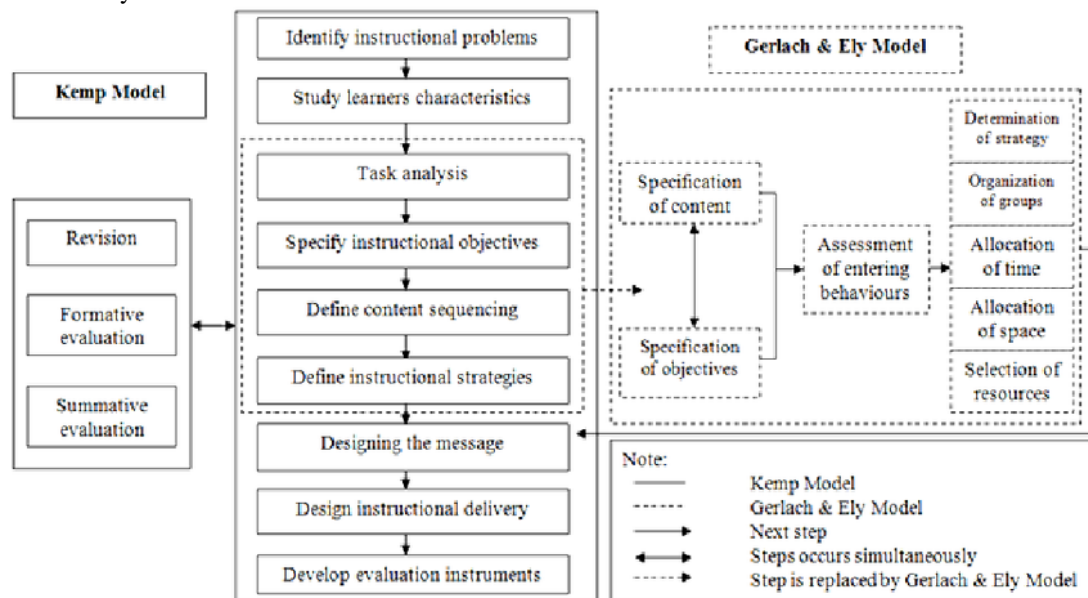
As mentioned, the aim of this mobile application is to improve students' achievement and motivation in learning Arabic, hence, subsequently, the researcher will measure the instructive design model by rationalizing the mobile application module, apply the theories in delivering the content and design a user interface. Moreover, to ensure that the students are able to learn flexibly in a simplified multimedia environment a number of important CLT and CTML principles have been applied into the design of this application, for instance, the information is presented in visual and audio forms as explained in the modality effect and principle. It is believed that presenting information in this way could minimize distraction and helps students to multitask as they dissect a diagram while simultaneously listening to the audio text explanation. This is also in line with the CTML principle of contiguity which stipulates that dissemination of information in diagrams and texts form is best presented adjacently (spatial-contiguity effect) and concurrently (temporal-contiguity effect).



Kemp Model



Gerlach & Ely Model



KEMGERLY Model: Source: (Lee and Kamisah, 2014)

2. Conclusion

Here, we posit that combining two instructional models could overcome the weakness of an individual model. In the application designed for this study, in order for students to have a unique and meaningful learning experience in the multimedia learning environment, elements of multimedia are incorporated in the information delivery process.

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