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EXPENDITURE

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SUMMARY OF RESEARCH FINDINGS

D	<p>ABSTRACT</p> <p>The teaching and learning of the Arabic language has been using traditional methods and textbooks for a very long time. The language has been used and taught for various reasons including communication purpose. However, in this era of Information and Communication Technology (ICT), the needs to produce the interactive and technology-based learning and teaching tools have been the area of research by various fields of knowledge. Hence, the huge use of mobile gadgets as Tablet PC, smartphones, I-Pads and so on has the learners to adapt with the mobile revolution in their learning preference of various educational application such as many Apps that are available in Google Store. This project was focusing on the design, development and evaluation of a mobile language guide application in Arabic language for Mutawwif (Umrah Tour Guide) VIA smart phones especially in Android supported platforms. Once completed, the project is expected to produce a mobile App of teaching and learning Arabic among Mutawwif (Umrah Tour Guide) via interactive mobile App prototype, which could enhance the learners' self-motivation and language learning for traveller's purpose. It will be helping the Mutawwif to communicate in Arabic more effectively and efficiently. The App also has the potential market to be commercialized and expanded to others umrah and Hajj travel and tours companies in Malaysia and all over the world.</p> <p>Keywords: Arabic learning, mobile learning, umrah, Mutawwif, mobile gadget.</p> <p>INTRODUCTION</p> <p>Mobile learning is found to be providing more flexible learning environment and activities for learners in addition to a traditional and face-to-face instruction. It is also supporting the use of PC desktop-based learning and as well as web-based learning between the instructors and learners in a normal classroom. The explosion use of various mobile gadgets such as PC tabs, smartphones, I-Pads and so on has tremendously affected learning process and delivery of content and messages faster and faster including the creation of a new field of research that relates to language learning and mobile technologies called Mobile Assisted Language Learning or MALL as mentioned by Colpaert (2004) and Beatty (2003). MALL is defined as "the processes of coming to know and being able to operate successfully in, and across, new and ever changing contexts and learning spaces with an emphasis on understanding and knowing how to utilize our everyday life-worlds as learning spaces" (Pachler, Bachmair & Cook, 2010, p. 6). Although there are pros and contras of this emerging mobile technologies in their social human interaction, mobile devices are finding their way into classrooms in children's life, and it is important for the researchers and educators to ensure that educational practice can include these technologies in productive ways (Abu Sa'alek, 2014).</p>
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REVIEW OF RELATED LITERATURE

Mobile learning is defined as ‘any educational provision where the sole or dominant technology are handheld or palmtop devices including mobile phones, smart phones, tablet PCs and laptops (Traxler, 2005; Gayeski, 2002). The potential use of mobile devices especially smart phones can be exploited as an attractive and effective learning platform such as promoting active learning (Attewell and Savill-Smith, 2004), merging works, study and leisure time in meaningful ways (Turunen, et al., 2003), supporting the effectiveness of mobile technology in a wide range of activities for learners of all ages (Proctor & Burton, 2003), generating strong positive interests among students (Wang, et. al, 2009; Uzunboylu, et. al, 2009), and provide convenient learning platform when using the mobile applications and tools in terms of learning flexibility and portability (Al Fahad 2009). According to Kukulska-Hulme & Shield (2008), the educators should understand how mobile technologies and devices can be efficiently used to support the effective process teaching and learning. In order to ensure effective use of mobiles devices in an educational setting, there are five features of MALL such as, accessibility, interactivity, immediacy, permanency, situating of instructional activities that should be considered into the account (Ogata, El-Bishouty & Yano, 2010). In addition to that based on Huang, Huang and Lin (2012), some merits of mobile technologies such as flexibility, low cost, small size and user-friendliness should also being considered in order to ensure good integration between the mobile devices and learning environment. Although a computer is more excellent than a mobile phone “for handling various types of information such as visual, sound, and textual information, but mobile phone is superior to a computer in portability (Yamaguchi, 2005) and its wide access (Tayebinik & Putih, 2012). The flexibility and mobility of mobile learning by using mobile devices are very much related to the tourism and tourists as they are travelling to various parts of the world based on their intended destinations. Hence, this study will be focusing on the analysis, design and development of a mobile language guide application in Arabic language for Mutawwif (Umrah Tour Guide) via smart phones especially in Android supported platforms.

PROBLEM STATEMENT

The teaching and learning of the Arabic language has been using traditional methods and textbooks for a very long time. Mohd Feham (2006) indicated that there had been fewer inventions and innovations in the field in Arabic language learning and several reasons that limited the number of educational software and courseware in Arabic language. However, in this era of Information and Communication Technology (ICT), the needs to produce the interactive and technology-based learning and teaching tools have been the area of research by various fields of knowledge. The explosion use of various mobile gadgets such as PC tabs, smartphones, I-Pads nowadays is the best mean and way in assisting them in learning Arabic language through a mobile language guide application which provide a flexible, friendly and easy use of mobile language guide application. The study on using mobile learning platform in Arabic was conducted by Mohd Feham et.al. (2014) by designing and evaluating a mobile learning portfolio known as ‘i-collect’ application for Arabic language teaching and learning. The researcher and his team also studied the potential use of mobile learning in Arabic language by designing and evaluating Mobile App Glossary of Terms in Islamic Banking and Finance (Mohd Feham et.al., 2016). In recent years, many tourist guidance applications have been developed, such as C-MAP (Sumi et.al. 1998), HIPS (O’Grady, et. al., 1999) and PEACH (Stock & Zancarano, 2002). For practitioners such as Mutawwif (Umrah Tour Guide) who is travelling to Saudi Arabia for performing Hajj and Umrah, they are in need of using Arabic language for various purposes such as communicating, shopping, travelling, and various forms of communications which are difficult for those with no formal learning experience in Arabic language. This study will be focusing on the analysis, design and development of a mobile language guide application in Arabic language for Mutawwif (Umrah Tour Guide) via smart phones especially in Android supported platforms. The early needs of the design of this mobile App will be collected among selected Mutawwif for Hajj and Umrah for gathering the suggestions and recommendations in designing the mobile language guide application. Then, the mobile application will be used by the Mutawwif (Umrah Tour Guide) practically in Andalusia Travel and Tours company for evaluating the App. Once completed, the project is expected to produce a mobile App of teaching and learning Arabic among Mutawwif (Umrah Tour Guide) via interactive mobile App prototype, which could enhance the learners’ self-motivation and language learning for traveller’s purpose.

RESEARCH QUESTIONS

This study embarks on the following research questions:

1. What are the needs and suggestion for the design of a mobile App of teaching and learning Arabic among Mutawwif (Umrah Tour Guide)?
2. How to design and develop a mobile App of teaching and learning Arabic among Mutawwif (Umrah Tour Guide) based on the needs analysis by the learners and practitioner among Mutawwif?
3. To what extent the practical use and effectiveness of a mobile App of teaching and learning Arabic among Mutawwif (Umrah Tour Guide)?

RESEARCH METHODOLOGY

This project will be focusing on the analysis, design and development of a mobile language guide application in Arabic language for Mutawwif (Umrah Tour Guide) via smart phones especially in Android supported platforms. The early needs of the design of this mobile App will be collected among selected Mutawwif for Hajj and Umrah for gathering the suggestions

and recommendations in designing the mobile language guide application. Then, the mobile application will be used by the Mutawwif (Umrah Tour Guide) practically in Andalusia Travel and Tours Company for evaluating the mobile app. The project will be using ADDIE instructional design model for the design and development of this mobile application (Malachowski, 2002). The research phases based on ADDIE instructional design model are as shown below:

- 1- Analysis: Learner's needs among selected Mutawwif, content development and current mobile app.
- 2- Design: Formulating design theory and storyboard
- 3- Development: Development tool (web-based tool, HTML + PHP), Playstore registration, uploading and converting, mobile apps package
- 4- Implementation and Evaluation: User Testing among Mutawwif at Andalusia Travel and Tours for the prototype at the 2 holy cities of Mecca and Medina.

The needs analysis survey was distributed among 100 respondents of a national conference of Mutawwif (Umrah Tour Guide) organized at Universiti Sains Islam Malaysia (USIM), Nilai, Negeri Sembilan, Malaysia on 18 October 2016 (Tuesday). The administered survey is adapted from Mohd Feham et. al. (2016). In addition, the evaluation survey was distributed among 50 respondents who are purposively selected from 30 mutawwif and 20 learners in Baitul Mal Professional Institute under the specialization of Diploma in Hajj and Umrah Management from 26 March until 20 April 2017. The administered survey is adapted from Amani Nawi (2014) and Mohd Taufik et. al. (2016). The validation of administered surveys was done by 3 experts in Instructional Design and Arabic language from IIUM and USIM.

RESULTS AND FINDINGS IN ANALYSIS PHASE:

The results and findings are reported in three main categories which are demographic information, needs analysis results of the design of mobile language traveller guide in Arabic for Mutawwif (umrah tour guide) via smart phones and further suggestions by the respondents for future design and development. The details are as shown in the following:

A) Demographic Information

As shown in Table 1, the majority of respondents are between the age of 20-29 (83%) while the rests are between the age of 30 and above (17%).

Table 1: Age of respondents

Age	Frequency (N)	Percentage (%)
20-29	83	83
30-39	14	14
40-49	2	2
50 and above	1	1
TOTAL	100	100%

In addition, it is very clear from Table 2 that most of the respondents are male with 99%. The results show that majority of them are in their early adolescent.

Table 2: Gender

Sex	Frequency (N)	Percentage (%)
Male	99	99
Female	1	1
Total	100	100

Table 3 shows that almost all of respondents are still in their early experience of career as Mutawwif with 99%. The results are consistent with the majority of majority of them who are in their early adolescent.

Table 3: Experience as Mutawwif

Years Of Experience	Frequency (N)	Percentage (%)
1-5	99	99
6-10	1	1
10 And Above	0	0
Total	100	100

Based on Table 4, it is clear that majority of respondents are using Malay as their spoken medium of instruction with 53.5%, followed by Arabic (26.2%), English (19.3%) and others (1.1%). The results may affect the design and development of this mobile language traveller guide in Arabic for Mutawwif (umrah tour guide) via smart phones which may be using trilingual form of languages in Malay as primary language, and supported by Arabic and English for translation.

Table 4: Spoken Language

Sex	Frequency (N)	Percentage (%)
Malay	100	53.5
English	36	19.3
Arabic	49	26.2
Others	2	1.1
Total	187	100

B) Analyzing The Needs In The Design Of Mobile Language Traveller Guide in Arabic for Mutawwif (Umrah Tour Guide) via Smart Phones

i) Device Ownership

The survey results (see Table 5) indicated that 76 out of 100 respondents (76%) had Android based device for their mobile phones followed by Apple iPhone (23%). The least was Windows Phone with a percentage of (1%) only. The factors of high ownership rate of Android based mobile phones may be attributed to the cheap and competitive price of these devices in the market. However, the simplicity, reliability and functionality may be best attributed to others, such as, Apple iPhone or Windows Phone.

Table 5: Device Ownership

Type of smartphone	Frequency (N)	Percentage (%)
Android	76	76
Apple iOS	23	23
Windows Phone	1	1
Blackberry	0	0
Others	0	0
Total	100	100

ii) Reasons for Having Mobile Devices

The respondents were asked on the reasons for having a mobile device. Table 6 tabulates the results with the majority of them (33.4%) stated Communication as the main reason. This was followed by Entertainment (23.8%), Education (22.4%), Business (17.6%) and others (2.8%).

The findings disclose some insights of the major reasons of mobile devices ownership among respondents which are communication, entertainment, education and business that highlight the important need and usage of mobile smartphones among them.

Table 6: Reasons for Having Mobile Devices

Purpose of use	Frequency (N)	Percentage (%)
Communication	97	33.4
Education	65	22.4
Entertainment	69	23.8
Business	51	17.6
Others	8	2.8
Total	290	100

iii) Level of agreement that every Mutawwif needs to learn or know Arabic language while performing their duties at Saudi Arabia

The respondents were also asked about the level of agreement that every Mutawwif needs to learn or know Arabic language while performing their duties at Saudi Arabia. Almost all of them agree with this item based on Table 7.

Table 7: Level of agreement for needs to learn or know Arabic among Mutawwif

Response	Frequency (N)	Percentage (%)
Yes	98	99
No	1	1
Total	99	100

iv) Experience of using in mobile language app via smartphone.

Based on Table 8, it is clear that most of respondents are having an experience of using in mobile language app via smartphone. The findings are important to highlight the importance of designing a special mobile language traveller guide in Arabic for mutawwif (umrah tour guide) via smart phones based on the needs analysis in this study.

Table 8: Experience of using in mobile language app via smartphone

Response	Frequency (N)	Percentage (%)
Yes	67	68.4
No	31	31.6
Total	98	100

iv) The reasons behind the needs to learn or know Arabic language among Mutawwif in performing their duties are shown in Table 9 as the following:

Table 9: reasons behind the needs to learn or know Arabic language among Mutawwif

Main Theme	Sub-Theme
a) The importance of Arabic language	<ul style="list-style-type: none"> Facilitating daily routines in Saudi. Arabic language is very important for management. Arabic language is the language of heaven.
	<ul style="list-style-type: none"> Because work at Saudi Arabia. Native language. Not all Mutawwifs are exposed to Arabic language. Because majority in Saudi is Arabic people. Because Arabic language is first and official language. It can improve our speaking, vocabulary and many more.
b) For communication purpose	<ul style="list-style-type: none"> Easier to communicate and interact with Saudis. To make it easier in assisting their duties. To improve and entertain Jemaah. To interact with Arabs, or in case emergency happened. We always communicate and deal with Saudian, such as book a bus, asking them some information about places. Especially Saudi dialect because the needs to communicate with locals are very frequent daily. Most of Saudis cannot understand Arabic.
c) For performing duties as Mutawwif	<ul style="list-style-type: none"> The Arabic language will smooth the business and performing skills. For communication purpose while performing their duties. The Arabic language will smooth the business and performing skills. Have to speak with bus driver, hotel manager and so on. To make the process will be smooth. Every detail of the duty is performed in Arabic. To make the process will be smooth. Can serve more effectively. Communicate with drivers especially. To ease communication with locals especially the authorities in satisfying the needs of pilgrims. To communicate with the locals and an ability to read any signs in Saudi.

v) The proposed contents of Arabic language that every Mutawwif needs to learn or know while performing their duties are shown in Table 10 as the following:

Table 10: The contents of Arabic language that every Mutawwif needs to learn or know

Main Category	Sub- Category
a) List of vocabularies, for example: food, places, clothes, etc.	<ul style="list-style-type: none"> List of places such as Makkah, streets, hotels, airports, recreational parks, name of streets, hills and palace, market, accommodations, tourism List of food, such as: Junk food, regular local food, Arabic food, groceries. List of buildings such as mosque, university, school, shop

	<ul style="list-style-type: none"> List of transportation such as cars, tyres, taxi, bus, direction, bus trip, slow down List of health care affairs such as hospital, medicine, doctor, ambulance, emergency case List of security affairs such as police. List of foreign affairs immigration, passport, embassy, airport information List of direction and time List of human feelings. List of human mobile communication, such as mobile operator. Groceries (vegetables, personal hygiene). List of words related to weather List of daily transactions such as bargaining
b) List of phrases, for example: greetings, request, asking, etc.	<ul style="list-style-type: none"> How are you? What do you want 'Wh' questions? Ordering, requesting, asking, welcoming, impressing, apologies, bargaining, begging, asking about direction I want ... Basic greetings Basic introductions Helping, buying, speech. Local dialects
c) Topics of Arabic grammar (muzakkar/ mu'annath, mufrad/muthanna/ jamak, dhama'ir, Arabic verbs, particles, etc.)	<ul style="list-style-type: none"> Nouns, verbs and particles Pronouns Simple phrases Not to stress on grammatical errors Simple Arabic morphology
d) Basic dialogues based on situations (airport, hospital, supermarket, etc.)	<ul style="list-style-type: none"> Hospital, clinic, medicine, doctor, pharmacy Airport, flight, flight delay, departure, arrival, luggage, boarding pass Immigration, passport Hotel, facilities, prayer room, toilet, Transportation, bus, taxi, direction, names of streets, towns Supermarket, groceries, market, asking price Mosques, directions
e) Other suggested topics	<ul style="list-style-type: none"> Names of diseases, health problem or situation. Emergency case Basic information on Mecca, Medina and Ta'if Goods, price, accommodation, hospitality, market of dates Mobile phones Check in procedures at the airports and hospitals. Historical information of Prophet Muhammad PBUH. History of 2 holy mosques, and related vocabularies to the structure of the mosques Eating at Restaurants. Information related to Quran and Hadith.

iii) Delivery and User Interface

The respondents were also asked to select their preferences on elements used for the delivery of the app and its user interface design. These include the form of the app, the navigation of content, the main menu design, the delivery platform, and the language interface. Table 9 illustrates the findings on these aspects in details. It is obvious that the combination of non-web-based and web-based app (hybrid) was preferable by the respondents with 48.4%. As for the navigation, the page flipping finger touch was rated highest (39.3%) which might refer to the speed factor and the factor of responsiveness. The main menu was preferable to be in a combination of both icons and their descriptions (58%). Though the limitation of the mobile screen size may have hindered this preference, an app with fewer items may be considered for the development. Furthermore, the delivery was opted to be on both phone and tablet platforms (50.8%). Finally, the language interface of preference was English with 36.3%. Giving the fact that English interface is familiar to the users in almost the majority of

apps available nowadays, the phenomenon is also true in this finding. The details are shown in Table 11 as the following:

Table 11: Proposed Delivery and User Interface

Interface preferences	Types of App	Frequency and Percentage
I prefer to have the app in a form of	Hybrid (combination of both)	59 (48.4%)
	Non web-based app	26 (21.3%)
	Web-based app	30.3 (5.3%)
	Total	122 (100%)
I prefer the navigation of the content app using	Page flipping	52 (39.3%)
	Previous and next buttons	34 (25.8%)
	Scroll up and down	46 (34.8%)
	Total	132 (100%)
I prefer the Main Menu in a form of	Both	69 (58%)
	List of icons only	33 (27.7%)
	List of words only	17 (14.3%)
	Total	119 (100%)
I prefer to have the app designed for	Both	66 (50.8%)
	Mobile phone	46 (35.4%)
	Tablet	18 (13.8%)
	Total	130 (100%)
I prefer the language interface in	Arabic	68 (33.8%)
	English	73 (36.3%)
	Malay	60 (29.9%)
	Total	201 (100%)

v) **Preferable Features**

Table 12 shows the features rated by the respondents in descending order. The highest requested feature was the use of trilingual form (English-Arabic- Malay) with frequency of 95, followed by search functionality (92), literal meaning of words (88), Arabic script of the words (82), Arabic transliteration of the words (82), and audio pronunciation of the words (80). The findings show that the respondents suggested a mobile language app which has trilingual form (English-Arabic-Malay) with the supports of literal meanings of word, Arabic transliteration, and audio pronunciation. All these features will be facilitated to them through a search functionality. Other preferable features of the app which are ranging between the frequencies of 70-79 are list of related words, sharing term definition via social networks (Twitter, Facebook, etc.), Extended meaning of the words, word properties of the term (noun, adjective, verb, etc.), words arranged alphabetically and view search history. This second category disposed the need of categorization of word list based on word properties, alphabetical order and relatedness. The third and less preferable features of the app which are ranging between the frequencies of 69 and below are added bookmarks, custom list of words, terms arranged topically, settings section for changing the app appearance and others. Some of the features can be integrated in the previous second category which are custom list of words and arranged of terms topically. are shown in Table 12 as the following:

Table 12: Preferable features of the app

Preferable features	Frequency
Trilingual form (English-Arabic- Malay)	95
Search functionality	92
Literal meaning of words	88
Arabic script of the words	82
Arabic transliteration of the words	82
Audio pronunciation of the words	80
List of related words	78
Share term definition via social networks (Twitter, Facebook, etc.)	78
Extended meaning of the words	77
Word properties of the term (noun, adjective, verb, etc.)	76
Words arranged alphabetically	74
View search history	70
Add bookmarks	69
Custom list of words	67
Terms arranged topically	63

Settings section for changing the app appearance
Others

62
39

C) Further Comments and Suggestions

The respondents were also asked to give their comments and suggestions in an open-ended questionnaire with regards to the design of mobile language traveller guide in Arabic for Mutawwif (umrah tour guide) via smart phones. The feedback is as important as the descriptive results and findings due to its in-depth responses and explanation by the respondents. They are analyzed and grouped accordingly based on specific themes as shown in Table 13:

Table 13: Qualitative Analysis of Comments and Suggestions

Main Theme	Comments and Suggestions
a) The important use of mobile phone	<ul style="list-style-type: none"> • Every mutawwif must have use mobile application for easy communication. • Highlight the effectiveness use of smartphone
b) Features of mobile app	<ul style="list-style-type: none"> • Free access of mobile app • Add features like prayer assist, doa' etc. • Make it in small size of data. • Enhanced with historical information on Mecca and Medina. • Guide for places to ease Mutawif job, eg: location for Rasulullah house with maps and pictures, etc. • List of emergency contact. • Mutawwif social media, eg: Each mutawwif can contact other mutawwif directly with this apps to ask any helps for example. • Offline option of using mobile app. • Enhanced with a Qiblat direction, Quran, Hadith from some famous book of hadith for example hadith 40 or Riyadus Solihin and certain du'a.
c) Learning support	<ul style="list-style-type: none"> • Add description of words with images. • Add some Arabic songs (jihad etc). • Word suggestion/ addition/ editing like google translate, Wikipedia etc. • Do both or separated vocabs in their specifications like hospital, police, immigration, airport etc and all list of words. • Add vocabularies from Saudi colloquial language. • Add several related dialogues at related places such as basic phrases, tourism, airport, etc. • Put the tasykeel for Arabic words. • Words arrange in group (additional to arrange in alphabetically).
d) Mobile app interface	<ul style="list-style-type: none"> • Colourful; make it more interesting. • Simple and friendly user interface. • Create option for native usual words and sentences. • Option for word's copy and paste. • Option to be used worldwide as well. • Design of a mutawwif friendly mobile app. • Create links to various matter especially related to umrah or hajj sciences-or fatwas of various teachings. • Should be simple to used and easy to navigate. • GPS that show the history part in Saudi like Ziyara GPS. • Add favourite button for words that frequently search or used. • Enhanced with audio support. • Compare with mobile language apps in other languages that are available in Google Playstore. • Need upgrade the app from time to time. • Add Arabic language games.

DISCUSSION OF FINDINGS

The discussion of findings in paper this can be categorized into several issues which are:

- 1) The importance of use of mobile language traveller guide in Arabic for Mutawwif

The findings highlighted the important use of mobile smart phones for Mutawwif in facilitating their duty performance in the holy cities of Mecca and Medina. Instead of using these mobile devices for communication and entertainment purposes, this study revealed that there is a need to enhance the usage of of mobile smart phones among Mutawwif for their communication and business related purposes.

2) The language content of mobile language traveller guide

The findings also explored very interesting points of the language content that need to be integrated in this mobile language traveller guide for Mutawwif. Although there are related books and references such as phrasebook for traveler and tourist in the bookstores, but the proposed language content from this study is more pertinent to the need of use among Mutawwif. However, the design of this mobile app will only focusing on the Arabic language content, with regardless to other proposed enhanced learning supports such as Quran, Hadith, Dua, maps, pictures, historical information and long dialogues due to limitation of research objectives in this study and the budget constraints. The enhanced version will be explored more in the future design and development of this mobile app. This version will be limited to the selection of wordlists, meaning in English and Malay, audio pronunciation of words and several basic feature of mobile app that will be launched in Android based platform only.

3) The preferable features of this mobile language app.

The preferable features of this mobile language app are also disclosed in this study which are similar to other available language mobile app in the current Google Playstore. The important suggestion is to facilitate the design of language mobile app for the use of Mutawwif in performing their communication and business related purposes as well as the option to use it worldwide.

Below is the initial development of initial prototype for mobile language traveller guide in Arabic for Mutawwif (umrah tour guide) via smart phones known as i-Mutawwif. The features of this mobile language app for Mutawwif will be designed based on the needs analysis within the limitations of this study.

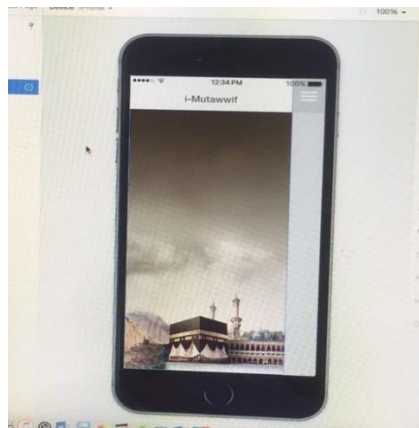


Figure 1: Initial prototype for mobile language traveller guide (i-Mutawwif)

DESIGN AND DEVELOPMENT OF i-MUTAWWIF : MOBILE LANGUAGE TRAVELLER GUIDE IN ARABIC FOR MUTAWWIF (UMRAH TOUR GUIDE) VIA SMART PHONES

The design and development process of the Mobile Language Traveller Guide in Arabic for Mutawwif (Umrah Tour Guide) Via Smart Phones is the main focus of this paper. The theoretical framework that underlies the design and the practical processes and procedures that contribute to the development is also explained. Table 14 illustrates the design and development framework, which was modified from ADDIE instructional design model.

ADDIE PHASE IN THE DESIGN AND DEVELOPMENT OF i-MUTAWWIF : MOBILE LANGUAGE TRAVELLER GUIDE IN ARABIC FOR MUTAWWIF (UMRAH TOUR GUIDE) VIA SMART PHONES

Table 14: Design and development framework of i-Mutawwif.

Phase	Details of Process
Analysis	Learner’s needs among selected Mutawwif, content development and current mobile app. The needs analysis survey was distributed among 100 respondents of a national conference of Mutawwif (Umrah Tour Guide) organized at Universiti Sains Islam Malaysia (USIM), Nilai, Negeri Sembilan, Malaysia on 18 October 2016 (Tuesday). The administered survey is adapted from Mohd Feham et. al. (2016).

Design	Formulating design theory and storyboard
Development	Development tool (web-based tool, HTML + PHP), Playstore registration, uploading and converting, mobile apps package
Implementation and Evaluation	The evaluation survey for the use of this mobile app was distributed among 50 respondents who are purposively selected from 30 mutawwif and 20 learners in Baitul Mal Professional Institute under the specialization of Diploma in Hajj and Umrah Management from 26 March until 20 April 2017.

DESIGN PRINCIPLES OF I-MUTAWWIF: MOBILE LANGUAGE TRAVELLER GUIDE IN ARABIC FOR MUTAWWIF (UMRAH TOUR GUIDE) VIA SMART PHONES

- 1- Based on need analysis results
- 2- Based on suggestions and recommendations by potential users
- 3- Based on limitations of the study

DEVELOPMENT OF I-MUTAWWIF: MOBILE LANGUAGE TRAVELLER GUIDE IN ARABIC FOR MUTAWWIF (UMRAH TOUR GUIDE) VIA SMART PHONES

The development of i-Mutawwif application is based on the use of hybrid platform for developing mobile application named as Ionic creator. Ionic is a HTML5 hybrid mobile framework built. By using this platform, it helps to build mobile applications fast, easy and beautiful. It also provide to users popular layouts that can be used during the process of development mobile application (Wilken, 2016).

Hybrid Mobile Application Development

The development process of i-Mutawwif mobile application is through hybrid platform. Hybrid platform allows its user to build an application by using their services. Figure 1 shows the process of developing i-Mutawwif application.



Figure 2: Process of developing i-Mutawwif mobile application.

Using hybrid platform to develop mobile application such as Ionic Creator has many advantages. Some of these advantages are:

1. Less skill: To develop mobile application, it require less skill and knowledge about coding, furthermore and its steps similar to website development process.
2. Cross-Platform: Hybrid platform allows its users to deploy the application on various operating system such as Windows, iOS and Android.
3. Quick and easy: There are only few steps to develop mobile application and it allow previewing instantly to smartphone as show at Figure 2. Providing working folders in ‘pages’ section and drag and drop option in ‘components’ section in Figure 3 helps users to build mobile application quicker and easy.

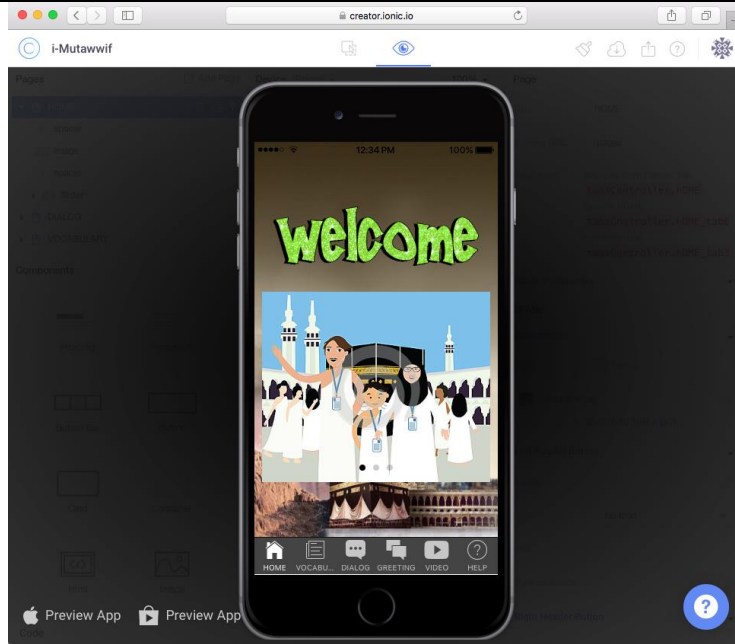


Figure 3: Page view for "Previewing" section in Ionic creator.

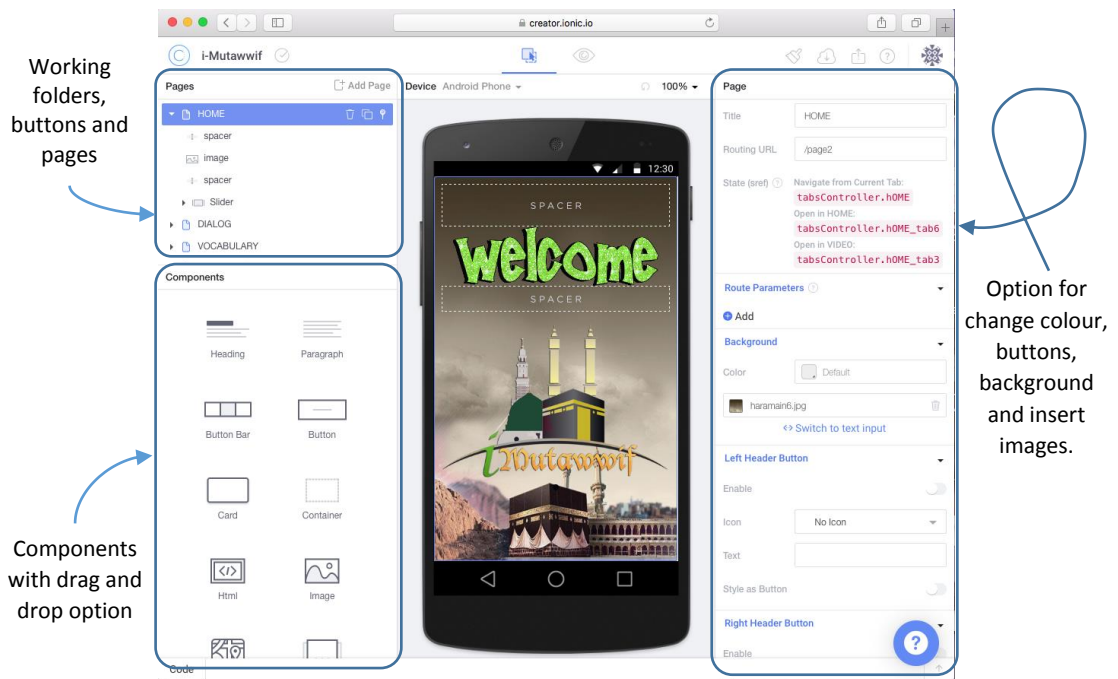


Figure 4: Page view for "Build" section in Ionic creator.

i) DEVELOPMENT PHASES AND PROCESSES

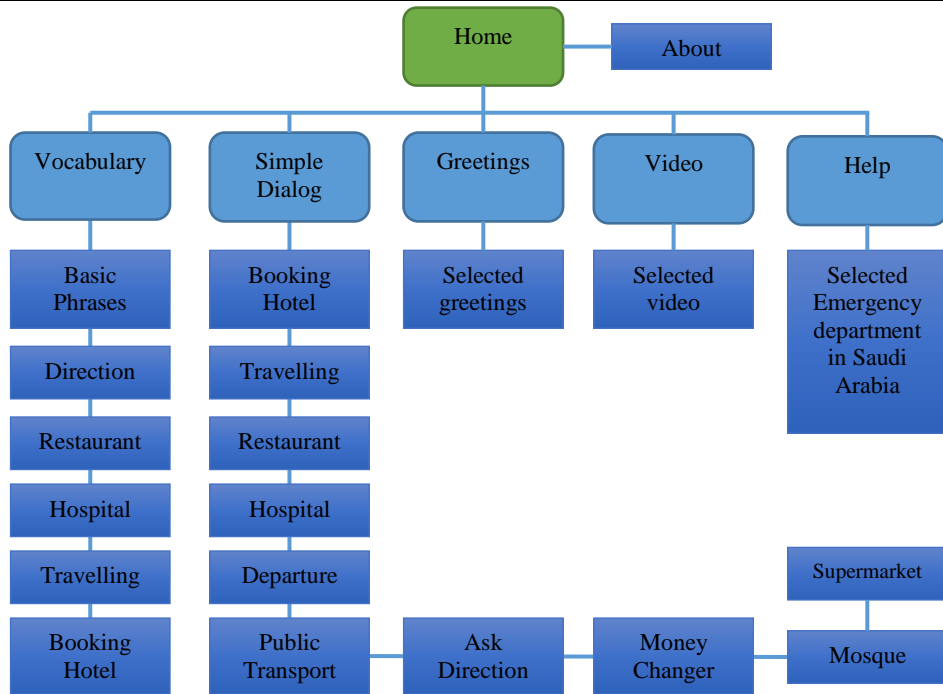
Development of i-Mutawwif mobile application undergo few phases and processes, from design principles, design storyboard, design mobile platform and design i-Mutawwif. The processes of this development are summarize in Table 15.

Table 15: Development phase and its process to develop i-Mutawwif.

PHASES	PROCESSES
Designing Principles	<ol style="list-style-type: none"> 1. Selection of words and phrases. 2. Interface preference.

3. Preferable features of mobile app.
4. Other suggestions by the users.

Designing Storyboard



Designing Mobile Platform

1. Hybrid mobile application platform
2. Design in a platform and publish into various operating system like Android, iOS and Windows.

Developing i-Mutawwif

Customize layout design in hybrid mobile application platform and deploy mobile app to smart phones and tablet as shown in Figure 5 and Figure 6.

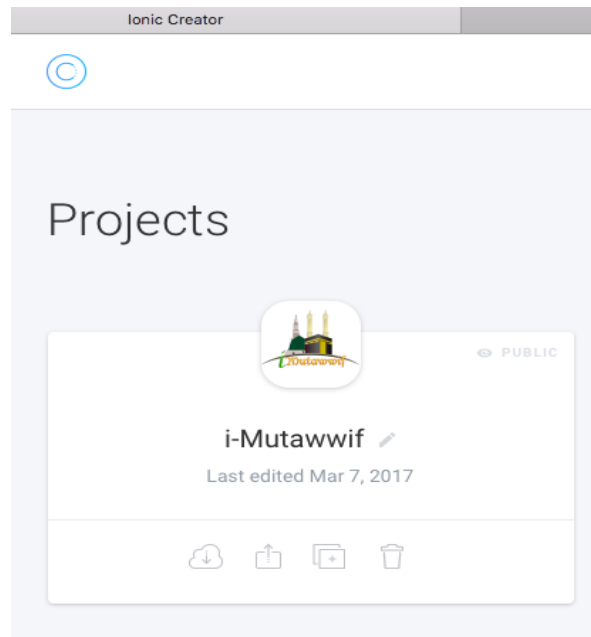


Figure 5: Ionic Dashboard to build mobile apps.

Export Your App



ZIP FILE APP STORE PACKAGE CREATOR MOBILE APP

Begin testing your projects live with the Creator Mobile App!

The Creator Mobile App is available on both [iOS](#) and [Android](#) app stores, and lets you preview all of your projects on a mobile device as though they were an actual natively deployed app.

Share Project Code

Share this code to allow people without accounts to view your app in Creator Mobile.

89D834

[Generate new code](#)

Share QR Code

Scan this QR code with Creator Mobile to preview your app.



Creator Project V1.1.0

Figure 6: Export options in Ionic Creator.

ii) NEEDS AND REQUIREMENTS OF DESIGN AND DEVELOPMENT OF i-MUTAWWIF

Using hybrid platform to develop apps such as Ionic Creator requires fast internet connection and subscription to Ionic creator itself. In addition, it only requires least knowledge of basic web development.

SAMPLES OF INTERFACE FOR I-MUTAWWIF: MOBILE LANGUAGE TRAVELLER GUIDE IN ARABIC FOR MUTAWWIF (UMRAH TOUR GUIDE) VIA SMART PHONES

Interface for i-Mutawwif app is simple as shown in Figure 7. It consist of tabs to navigate the pages inside the app. There are six tabs menu in this app; Home, Vocabulary, Dialog, Greeting, Video and Help. Home tab only shown welcoming page and option for slide pictures. While vocabulary tab consist of basic words in daily conversation during perform Hajj and Umrah. Simple dialogs are also included in this app for basic conversation as shown in Figure 8 and 9. In addition, this app also provides daily basic greetings to its users such as “good morning”, “hope to see you again” and “how are you?”. While video tab is for future improvement in this application. The last tab is “Help”. It consist of several emergency contact numbers in Saudi.



Figure 7: Main interface or 'Home' tab for i-Mutawwif mobile application.

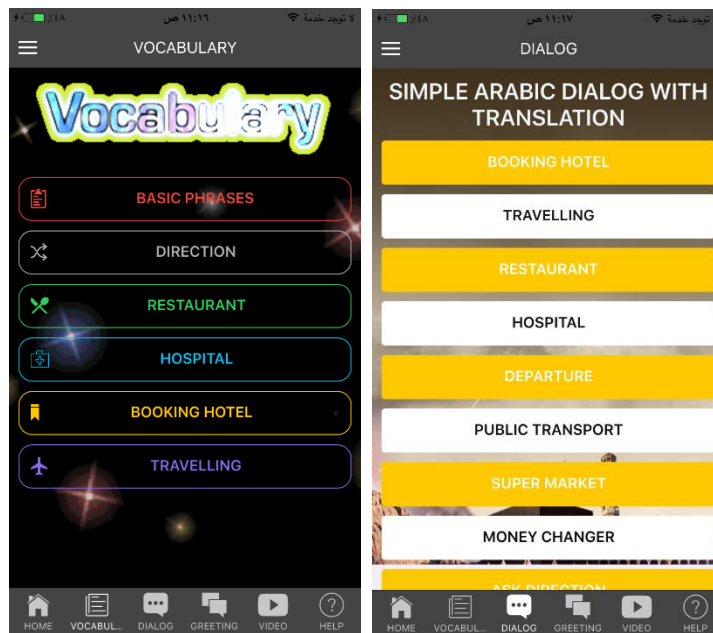


Figure 8: Vocabulary and dialogues tabs in i-Mutawwif mobile application.

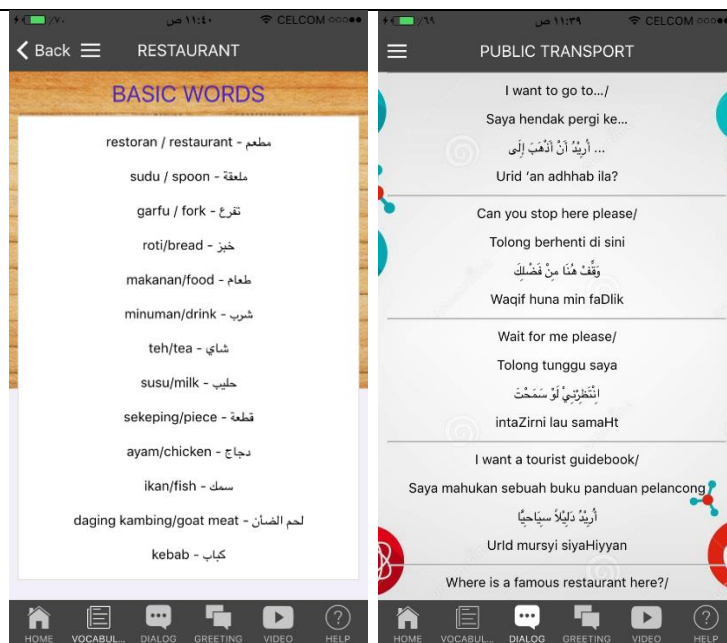


Figure 9: Page view for Vocabulary and Dialog in i-Mutawwif mobile application.

CHARACTERISTICS OF I-MUTAWWIF: MOBILE LANGUAGE TRAVELLER GUIDE IN ARABIC FOR MUTAWWIF (UMRAH TOUR GUIDE) VIA SMART PHONES

1. Selection of the often used vocabularies and words during performing Hajj and Umrah.
2. Assist *mutawwif* to use simple phrases in Arabic language.
3. Simple conversation according to places.
4. Comes with translation in both Malay and English languages.
5. Spelling Arabic words and sentences in Latin

CONCLUSION

The design and development of i-Mutawwif was done based on the results of needs analysis as explained before in the beginning of this study.

EVALUATION RESULTS OF i-MUTAWWIF: A MOBILE LANGUAGE TRAVELLER GUIDE IN ARABIC FOR MUTAWWIF (UMRAH TOUR GUIDE)

The results and findings are reported in three main categories which are demographic information, needs analysis results of the design of mobile language traveller guide in Arabic for Mutawwif (umrah tour guide) via smart phones and further suggestions by the respondents for future design and development. The details are as shown in the following:

A) Demographic Information

As shown in Table 15, the majority of respondents are between the age of 20-29 (82%) while the rests are between the age of 30 and above (10%) and missing percentage is 8%.

Table 15: Age of respondents

Age	Frequency (N)	Percentage (%)
20-29	41	82
30-39	5	10
40-49	0	0
Missing	4	8
TOTAL	50	100%

In addition, it is very clear from Table 16 that most of the respondents are male with 88%. The results show that majority of them are in their early adolescent.

Table 16: Gender

Sex	Frequency (N)	Percentage (%)
Male	35	71.4
Female	15	30.6
Total	50	100

Table 17 shows that the majority are still in their early experience of career as Mutawwif with 62%. The results are consistent with the majority of majority of them who are in their early adolescent.

Table 17: Experience as Mutawwif

Years Of Experience	Frequency (N)	Percentage (%)
1-5	31	62
6-10	0	0
No Experience	11	22
Missing	6	12
Total	50	100

Based on Table 18, it is clear that majority of respondents are using Malay as their spoken medium of instruction with 53.5%, followed by Arabic (26.2%), English (19.3%) and others (1.1%). The results may affect the design and development of this mobile language traveller guide in Arabic for Mutawwif (umrah tour guide) via smart phones which may be using trilingual form of languages in Malay as primary language, and supported by Arabic and English for translation.

Table 18: Spoken Language

Sex	Frequency (N)	Percentage (%)
Malay	49	98
English	26	52
Arabic	24	48
Others	1	2
Missing	1	2

B) Evaluation on the Features and Performance of Mobile Language Traveller Guide in Arabic for Mutawwif (Umrah Tour Guide) via Smart Phones

Table 19: Features and Performance of Mobile Language Traveller Guide in Arabic for Mutawwif

No	Items	Strongly disagree	Disagree	Somewhat	Agree	Strongly Agree
1.	Interface design is attractive.	5 (10%)	2 (4%)	10 (20%)	11 (22%)	20 (40%)
2.	Font of text is appropriate and readable.	0	0	0	0	50 (100%)
3.	Graphic used is attractive.	0	0	0	0	50 (100%)
4.	Icon used is suitable.	0	0	0	0	50 (100%)
5.	The quality of audio is authorize.	0	0	0	0	50 (100%)
6.	Interactive (eg: scroll over, touch button, hyperlink).	0	0	0	5 (10%)	45 (90%)
7.	User friendly (eg: easy to use the application, navigation to each topic, etc).	1 (2%)	2 (8%)	7 (14%)	11 (22%)	24 (48%)
8.	Tutorial provided is easy to understand.	6 (12%)	1 (2%)	6 (12%)	9 (18%)	26 (52%)
9.	Easy to get the information.	6 (12%)	1 (2%)	6 (12%)	11 (22%)	24 (48%)
10.	The information is well arranged.	0	0	0	0	50 (100%)
11.	The overall website is excellent.	4 (8%)	3 (6%)	11 (22%)	11 (22%)	21 (42%)

In general, Table 19 shows that almost all respondents are satisfied with the features and performance of this mobile app for “agree” and strong agree” from 62% to 100% which is considered as majority.

C) Evaluation on the Content Delivery of Mobile Language Traveller Guide in Arabic for Mutawwif (Umrah Tour Guide) via Smart Phones

Table 20: Content Delivery of Mobile Language Traveller Guide in Arabic for Mutawwif

No	Items	Strongly disagree	Disagree	Somewhat	Agree	Strongly Agree
1.	Content of the website is related to the topic.	5 (10%)	2 (4%)	7 (14%)	10 (20%)	26 (52%)
2.	Content of the website is relevant.	1 (2%)	0	9 (18%)	8 (16%)	27 (54%)
3.	The content is arranged in an orderly manner (eg: easy to hard, etc).	6 (12%)	2 (4%)	6 (12%)	14 (28%)	22 (44%)
4.	Use simple language and easy to understand.	5 (10%)	1 (2%)	7 (14%)	10 (20%)	27 (54%)
5.	The content delivers most of the information you expected to learn.	0	0	0	0	50 (100%)
6.	The examples shown are clear.	5 (10%)	2 (4%)	7 (14%)	13 (26%)	22 (44%)
7.	Supporting materials are provided (eg: exercises, activity, games, etc).	6 (12%)	3 (6%)	8 (16%)	12 (24%)	21 (42%)
8.	Supporting materials provided are adequate and various.	5 (10%)	2 (4%)	10 (20%)	11 (22%)	22 (44%)
9.	The contents of the module helps me to understand Arabic for tourism purpose very well.	5 (10%)	1 (2%)	10 (20%)	12 (24%)	22 (44%)
10.	The overall content provided is useful.	5 (10%)	1 (2%)	7 (14%)	12 (24%)	25 (50%)

In general, Table 20 shows that almost all respondents are satisfied with the content delivery of this mobile app for “agree” and strong agree” from 6% to 100% which is considered as majority.

CONCLUSION

This research reports on evaluation survey on the design of mobile language traveller guide in Arabic for Mutawwif (umrah tour guide) via smart phones. Overall findings show positive feedback among respondents with regard to the evaluation use of this mobile language traveller guide. The respondents also have contributing their suggestions and comments in terms of further improvement of this mobile language app.

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RESEARCH OUTPUTS

1- Muhammad Sabri Sahrir et. al. (2017). The Needs Analysis towards the Design of Mobile Language Traveller Guide in Arabic for Mutawwif (Umrah Tour Guide) via Smart Phones. International Conference on Humanities, Language, Culture & Business, Cameron Pahang Highlands 2017. 22-23 April 2017, Hotel De'La Ferns, Cameron Highlands Pahang, Malaysia.

2- Muhammad Sabri Sahrir et. al. (2017). The Development and Evaluation of i-Mutawwif: A Mobile Language Traveller Guide in Arabic for Mutawwif (Umrah Tour Guide) Via Smart Phones. Turkish Online Journal of Educational Technology (TOJET). SCOPUS. (Under Review)

3- Intellectual Properties (IP) Registration. Notification of copyright application LY2016003749. IIUM/504/14/4/1

4- Mohd Firdaus Yahaya, Muhammad Sabri Sahrir et. al. (2017). Bronze Medal. Research and Innovation Week, UniSZA Kuala Terengganu, Terengganu. 12-13 April 2017.

5- Muhammad Sabri Sahrir et. al. (2017). The Development and Evaluation of i-Mutawwif: A Mobile Language Traveller Guide in Arabic for Mutawwif (Umrah Tour Guide) Via Smart Phones. Turkish Online Journal of Distance Education (TODJE). SCOPUS. (Submitted)

PROBLEMS / CONSTRAINTS IF ANY

E This mobile app can be enhanced more if it is funded by more amounts of research grant in the future. Thus, the research team will try to apply for PRGS from MoHE for future phase and planning of enhancing this mobile application.

Date : 2 May 2017

Project Leader's Signature:



ENDORSEMENT BY HEAD OF RESEARCH

F. Comments:
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Signature / Stamps:

Date:

RESEARCH MANAGEMENT CENTRE

G.

Comments:

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Signature / Stamps:

Date