Digital storytelling training kit for assessing depression risk for the elderly

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ABSTRACT

This research aims to design and develop a mobile-learning training kit for assessing the depression risk of elderly Muslims using the spiritual dimension of human security. In this research, we compare the achievements before and after the training of village health volunteers using mobile-learning training kits in a simple, random way. The sample is divided into two groups: a sample of 30 individuals is used to determine the performance and the academic achievement of the mobile-learning training kit. In addition, 33 other people are used to assess user satisfaction with the mobile learning training kit. The research indicates that the design and development of the training kits involving digital storytelling are characterized by two languages: Thai and Malay, consisting of 4 modules, with an efficiency of 81.56. In terms of achievement in a series of training sessions using the mobile-learning training kit, it was found that after training, the results were statistically significantly higher than before training at .05 and that the users' satisfaction with the training kit was extremely high.

Keywords: *mobile learning training kits; digital storytelling; depression risk; spiritual dimensions; Muslim Elderly*

INTRODUCTION

Today, communication technology and Internet networking are constantly improving. This affects development, especially in terms of educational innovation. Today, technology has been widely-introduced in education, but not only in regular classrooms. There has been a changing evolution with the development of technology associated with communicating information. More efficient and faster connectivity now exists using different networking systems. Mobile communication devices such as smartphones, tablets, iPads, and portable computers can support networking connections, animation presentations, and mixed media, that are compatible with mobile learning in the form of portable mobile device learning systems. It is an approach that is being used widely (Bukharaev & Wisam Altaher, 2017). Mobile education or M-Learning is a form of education provision that is emerging in the face of traditional learning methods. However, these are limited. There is a need to formulate the needs of learners to allow them to interact with different parties (Almaiah et al., 2016) in the educational process, without sitting in a classroom or in front of a computer screen. This involves achieving participation and reducing the geographical distancing of violators of physical cooperation between the learners themselves and between the learner and the instructor (Chigona, 2013).   In the mobile learning context data quality refers to learning content such as

lectures, courses, homework, images, and quizzes. Another important point is that data quality also refers to the format of the learning content, such as basic learning content - text, graphics, and charts, multimedia learning content- audio, video, and animation, and shared learning content - sharing and submitting learning content files (Techakosit & Nilsook, 2018). Learning content is a key component of the success of mobile learning applications (Sarrab et al., 2015). Most M-learning applications are characterized by improving the interaction between learners and instructors in such a way as to provide a high degree of interaction and flexibility in the learning process. The teaching design model includes both the design stages of educational organizations and training (Sarrab et al., 2018). Team collaboration options and management practices have adopted mobile instruction design models that have been developed in accordance with the ADDIE framework (Analysis Design, Development). The ADDIE teaching design framework is a commonly used process traditionally used by teaching designers and training developers to provide a dynamic and flexible approach for creating effective training and performance support tools.

Mobile learning can be used to develop knowledge in the form of training kits (Leela et al., 2019). These can be used to solve problems for multiple agencies or communities. Mental health and psychiatric problems are highly prevalent throughout the world. According to national statistics, the number of patients with mental health and psychiatric health problems who are admitted to medical facilities throughout Thailand is likely to increase every year. It was 38,267 in 2018, 36,569 in 2019, and 39,716 in 2020. (Service of Psychiatric Patients Center Thailand Department of Mental Health, 2021) Common mental health problems include dementia and depression with a risk of suicide. Reports of suicide on the part of elderly people in Thailand increased from 801 in 2017, 915 in 2018, and 927 in 2019 (Department of Mental Health Ministry of Public Health, 2021). The data show the various reasons for this – whether it is psychosocial factors underlying a person's mental illness, such as depression or substance abuse - or social or psychosocial factors, especially chronic stress. This may be due to many reasons such as economic problems, inequality, or not enough to eat (Department of Mental Health Ministry of Public Health, 2020). There may also be other personal problems that can't be determined. The people of the town of Narathiwat are considered to be at risk of suffering from depression due to the pressure of unrest in the area. There are also economic problems, domestic violence issues, and influences from those closest to the elderly. In 2020, the Depression Screening Report (2Q) Among the Elderly, 12th Health District, Narathiwat Province was published. Out of a total of 77,463 elderly people, only 54,746 could be screened (Public Health Office Narathiwat Province, 2021). The elderly's depressive screening process remains to be continued, with 22,717 cases still unscreened. The District Health Promoting Hospital is the agency directly responsible for screening information on diseases related to the elderly. If the data is not collected, it will affect the screening results of diseases of the elderly. Lamphu Subdistrict, Narathiwat Province is an ideal place for storing research data because it is less vulnerable to unrest, and is a Buddhist and Islamic community. There are multicultural lifestyles, beliefs, religious practices, as well as being the home to a large number of elderly people.

Digital storytelling is a very popular learning technique because it fits in with an era when learning technology is used. It is particularly suitable for use in training village public health volunteers, allowing them to learn about caring for elderly Muslims. This involves assessing the risk of depression. Learning in a digital storytelling style is one of the activities that modern learners are using. It has been done to date on social media (Sarnok et al., 2019). The meaning of digital storytelling is the use of digital media and technology to convey the story and emotions of the narrator (Robin, 2016). Digital storytelling combines the art of storytelling with digital media, including text, images, recorded audio captions, music, and videos. These multimedia elements are combined using computer software and mobile applications. All this material, when used in digital storytelling to collect media, will be suitable for village health volunteers, both Buddhist and Islamic, who want to access information about depression risk. Certainly, some of the public health volunteers in each district have no prior knowledge of the care of the elderly in terms of mental disease. This makes it difficult for them to understand nature according to Islam, and it is important to convey a story of how they

should act to avoid developing depression. The mobile-learning training kit has been developed in the form of 2 language videos, representing a good way for developers to learn digital storytelling, with an emphasis on creating media that inspires learners (Sarnok et al., 2020). It is a collaborative learning model in a digital environment that creates media and provides experience through digital storytelling. This means creating a mobile learning experience using a digital network and the Internet to facilitate learning (Dolawattha et al., 2019). This allows the developer to develop learning and growth in all aspects, both in the real and digital world (Sarnok et al., 2021). At the same time, learners can control the time (Alismail, 2015), location, and direction of their learning using lessons, videos, exercises, quizzes, and cognitive leadership. This leads to working practicality through the use of a Depression Risk Assessment Form. These approaches cause changes in the learners' abilities and experiences using various technologies. This leads to the development of a combination of skills, knowledge, and understanding for learners in the world of digital learning.

The composition of the soul consists of a few elements such as: Meaning and goals in life involve finding the meaning of life in such a way as to gain self-understanding and an understanding of things related to oneself. This motivates a person to live a life in order to achieve his or her goals. Interacting with other people, with God, or with anything beyond him/herself is an expression of love, forgiveness, trust in oneself, and trust in others. This is the true God or what you respect and believe in, to the highest things that you respect and use as a psychological attachment. This allows a person to live a meaningful life and have a goal in life. Hope is a matter of individual feelings and emotions (Highfield, 1992). It is an expression of a desire to achieve an intended success. When a person believes that hope is achieved as intended, it will change lives for the better (Carson, 1989). According to Muslim beliefs, there are activities that are aligned with the Muslim way, such as reading the Koran, listening to the 99 names of Allah, crafts, art, Ligehulu, Guan Azuro, exercises, muscle, making Hala Koh Ho, listening to Kutbah, walking, Islamic Supplication (Du'a), and recounting the Prophet's History of Islam. These activities can be divided in terms of three Islamic spiritual dimensions: 1) meaningfulness and life goals, 2) relationships with other people and 3) expectation (Phibal, 2018).

Based on the above-mentioned issues, the investigators saw the importance of developing a mobile-learning training kit, with digital storytelling for assessing the depression risk facing elderly Muslims using spiritual dimensions in human security. The human security spiritual dimension was developed to provide the village health volunteers with a knowledge of depressive disorders and how to teach elderly Muslims to prevent this disease. This is done through digital storytelling in the form of a text and action innovation knowledge management manual in 2 languages. The aim is to prevent depression on the part of elderly Muslims using the spiritual dimensions of human security in the form of animated video media, a pre-training quiz and post-training quiz, and a risk of depression assessment form used to screen the elderly. This form focuses on asking the volunteers to find symptoms in an elderly person that have been present in the last two weeks. If the assessed person is found to be at risk or prone to depression, a 9Q depression assessment must be performed. Upon completion of the evaluation, the scores are combined and vary according to the depression screening form. The volunteer then submits the information obtained from the assessment to Narathiwat Provincial Public Health to seek a further solution.

RESEARCH OBJECTIVES

i. To design and develop a mobile-learning training kit involving digital storytelling to assess the depression risk of elderly Muslims using health volunteers from Lamphu Subdistrict, Mueang District, Narathiwat Province.

ii. To compare achievements before and after the use of the mobile-learning training kits in terms of assessing the depression risk of elderly Muslims using the spiritual dimension of human security.

iii.   To assess the satisfaction of the village health volunteers with regard to the use of the mobile-learning training kits in terms of assessing the depression risk of elderly Muslims based on spiritual dimensions in human security.

RESEARCH DESIGN

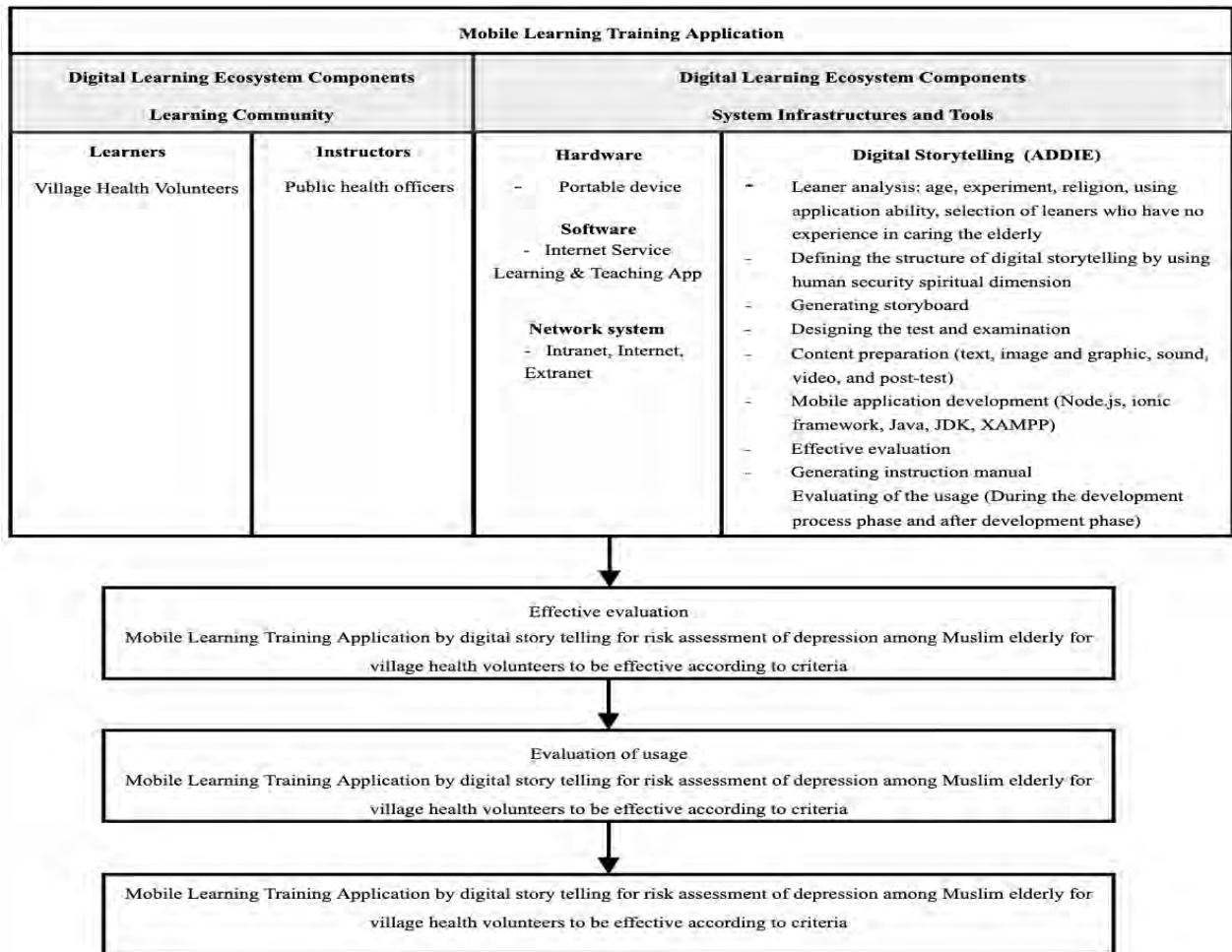The research design is illustrated in Figure 1 below.

Figure 1: Research Design

SCOPE OF RESEARCH

This research was conducted using a sample of 150 village health volunteers. The Lamphu Sub-district, Mueang District, Narathiwat Province consists of the following 11 villages: (1) Khlong Sai (2) Lamphu (3) Thung Khanun (4) Kokko (5) Rama (6) House (7) Ka Soe (8) Plak Pla (9) Thung Ngai (10) Durian Nok and (11) Bago. The sample used in the research was obtained by simple randomization in all 11 villages. The sample consists of two groups: a sample of 30 individuals, who possess smartphones running the Android operating systems, and who have no experience caring for elderly Muslims with depression risk were used to determine how effective the training

kit is; and a sample of 33 village health volunteers, who also possess Android phones and no experience caring for elderly Muslim patients with depression risk and are not included in those seeking effectiveness.

RESEARCH APPROACH

The researchers studied documents and research related to the design and development of mobile-learning training kits involving digital storytelling, for the assessment of the depression risk of elderly Muslims. The researchers designed the means of instruction according to the ADDIE model (Sarrab et al., 2018) to develop mobile-learning training kits as follows:

Step 1: Analysis

The details are as follows: The age of the volunteers is between 30 and 60 years of age. These individuals have no experience of caring for elderly Muslims at risk of depression. They are both Buddhist and Islamic volunteers. Most of the Buddhist volunteers speak Malay and all volunteers are able to access knowledge through mobile devices.

Content analysis and behavioral purposes. The researchers analyzed the theoretical learning content. They considered the practices that align with the research objectives by dividing the required content into sub-modules as follows: Meanings and causes of depression; Symptoms and warning signs of depression; How to Prevent Depression including the Anti-Depressant Technology Transfer Guide developed by Phibal (2018) Identifying activities that prevent depression according to Muslim principles such as anaised prayer, reading the Koran, listening to the 99 names of Allah, crafts, art, Ligehulu, Guan Azuro, muscle-stretching exercises, making Hala Koh Ho; listening to Kutbah, walking, and recounting the Prophet's History of Islam. The activities can be divided according to three aspects of Spiritual Dimensions according to Islam: 1. Meaning and Life Goals 2. Other People and Powers Beyond Themselves 3. Expectation

The researchers then wrote a plan for training, providing knowledge, and preventing the risk of, depression. Direct content experts were used to validate the content and the work was revised based on the expert feedback.

The researchers analyzed the environment and the resources required. It was decided that the learners had to have Android mobile devices. They also analyzed the best media formats to learn according to mobile learning design principles (Insaard, 2018). These were applied to suit the age of the learners.

Step 2: Design

The design stages were as follows:
1) Structure the training kit system through mobile logging. Apply analytical content to a blended media design according to mobile scheduling design principles (Sarrab et al., 2018). Design volunteer learning according to the sequence of the content. This was divided into 4 sub-modules. The main modules are: The menu of lessons on depression risk prevention. This includes sub-modules such as causes, depressive symptoms, types of depression, how to prevent depression, risk factors for depression. A knowledge management manual was developed to transfer knowledge, prevent risk of depression, leave space on the screen, and space to scroll down the screen, and sort the order from common content to specific content.

2) Write a storyboard by ordering content in order of importance, from theory to hands-on, using text, illustrations, animations or videos, all appropriate for a mobile screen. There are

seven (7) menus including: menu of lessons on depression prevention; anti-depressant animation menu (in Thai parlance); anti-depressant animation menu (in Malay parlance); menu to assess the risk of depression; a Depression Risk Assessment Menu; a Post-Study Assessment Menu; and a Satisfaction Questionnaire Menu.

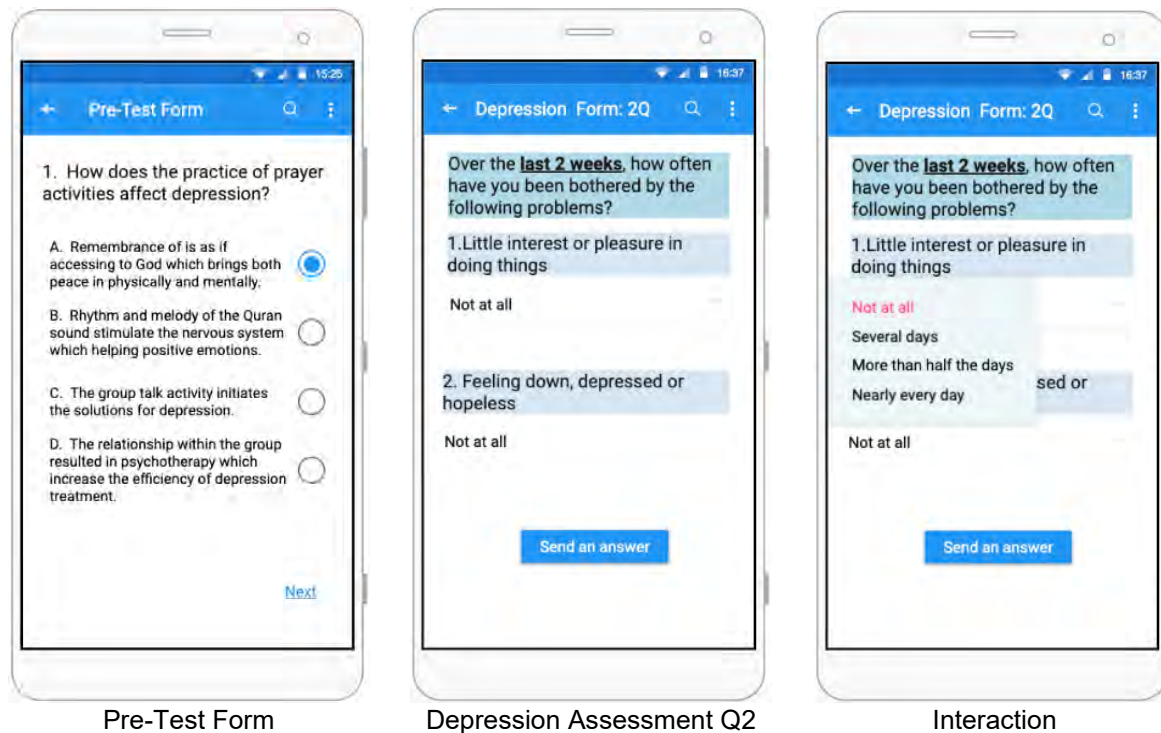The mobile application screen is illustrated in Figure 2 below.

| Menu | Sign Up | Lessons |

| Pre-Test Form | Depression Assessment Q2 | Interaction |
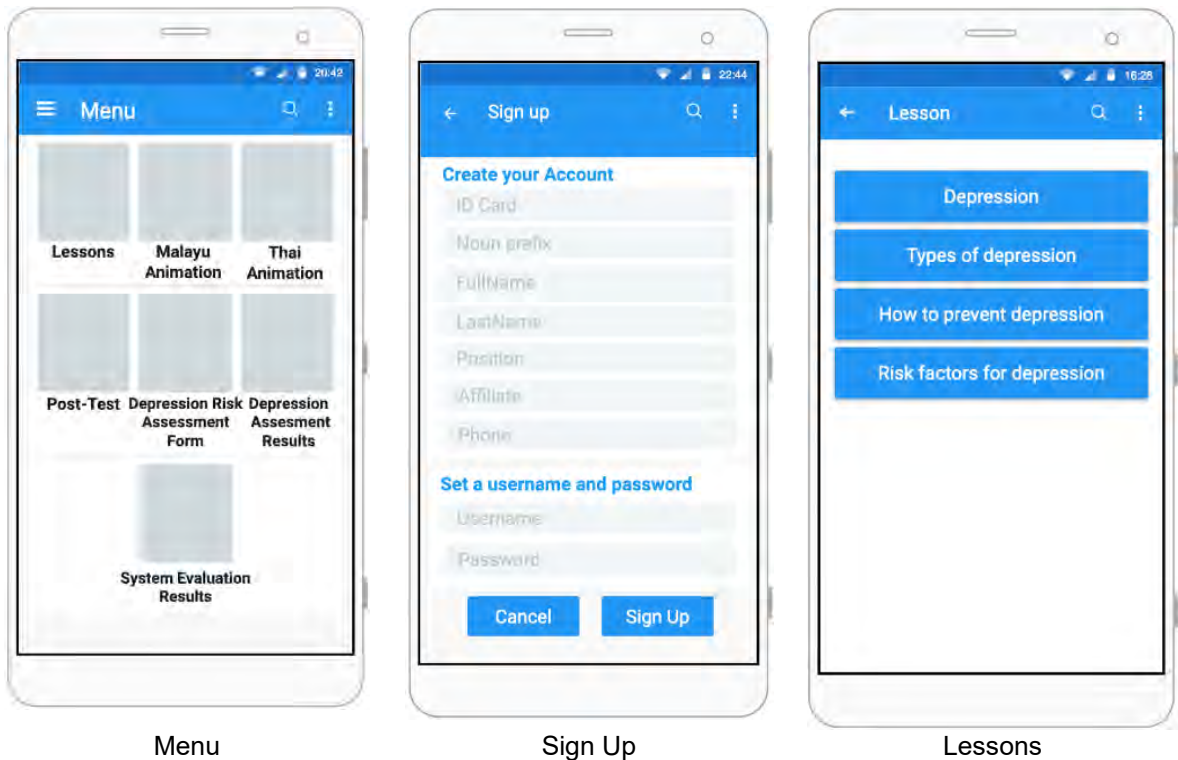
Figure 2: The Mobile Application Screen

3) Quiz design for training kits through mobile learning. The steps involved are: analyze the content in terms of cognition, memory, understanding. Implement, analyze, synthesize and evaluate to plan the test design in accordance with the content and behaviors you want to measure. Prepare a schedule to determine the characteristics of the tests needed. Take the results of the content analysis and create a multiple-choice test. According to the principles of test design, at least 25% (Insaard, 2018) of the actual required number of tests must be issued (Worakham 2018). Test for validity with the help of two content experts and one measurement and evaluation expert, and select the test with a conformity index (IOC) value of 0.70 or higher (Worakham 2018). Take the selected test and make improvement. Undertake a trial with 30 public health volunteers who have experience in caring for elderly Muslims with a risk of depression. Take the result of the test and score them with a correct answer being given 1 point and an incorrect answer 0 points. Force all answers until 30. Take the scores obtained from the tests to analyze the quality of the test by determining the classification power (r) and the difficult value (p) of the test. Select questions with difficulty values of between 0.2 and 0.8 and the authority is classified between 0.2 and 0.80. A total of 26 acceptable tests were obtained. Consider selection questions in accordance with the training analysis schedule (Insaard, 2018). The researcher analyzed the sentiment values by measuring consistency within the Kuder Richardson Methods test. This showed a sentiment value of 0.78. When the test meets the quality criteria, the test is put in the mobile-learning training kit.

To conduct tests on samples used to find academic achievement training kits set of 33 people. Mobile learning training kit design process: The Mobile Language Training Kit Development Process is as shown in Figure 3.

Figure 3: A guide to using the mobile learning training kit.

The main pages of the application Login Menu

The login menu is a menu used for 2 groups of system users: Health workers and village health volunteers. Each was able to access the mobile-learning training kits involving digital storytelling for assessing the depression risk of elderly Muslims. In terms of this menu, the Health Workers (Admin) monitored the access rights of the village health volunteers for whom permission was first

required from the health authorities. The Health Workers (Admin) then had to confirm the application of a volunteer for membership to prevent unauthorized use of the program.

The subscription menu is for the volunteers who have to initially sign up for a subscription by providing basic self-profile information such as prefix, first name, last name, ID number, position, affiliation, and telephone number. They also had to set up a user name and password. After entering this information, a green bar is displayed which indicates that the information provided is correct. The "Sign up" button then appears to allow the volunteer to sign up.

The Application Manual menu is a menu used to describe the procedures associated with using the mobile-learning training kit which contains a digital story for assessing the depression risk of elderly Muslims and which can be accessed by both Health Workers (Admin) and volunteers. They can then use the system in video format.

When the Health Worker (Admin) confirms the volunteer's application for membership the volunteer can access the system by entering his/her username and password. In the event that either of these is incorrect, there will be a warning message: "Your name or password is invalid".

When the volunteer has entered the correct username and password, the next page of the menu will appear. This will first consist of pre-training tests for volunteers to assess their knowledge. They can then continue to access other content by selecting the "Send answer" button.

After completing the pre-training test, the scores obtained by the volunteers are collected. Each is entered into the database. The volunteers then enter the main menu of the application so that they can gain the knowledge they need. The exercise scores associated with the individual lessons are also stored in the database to be compared to the post-study tests, with only the Health Workers (Admin) seeing the information.

Screen for Village Health Volunteers (User)

The procedure works as follows: The main menu after the volunteers completes the pre-training test, consist of the following menus:
1) Lessons: What is the menu regarding depression content? It deals with the causes, symptoms, types, prevention methods and risk factors, along with exercises in each chapter when the volunteer finishes learning.
2) Innovative Animation Knowledge Management Guide to Prevent Depression on the part of elderly Muslims using the Spiritual Dimensions of Human Security. This is a menu for the volunteers. It is used for looking at how to prevent depression on the part of elderly Muslims. It can be used as a guide to educate elderly Muslims to prevent depression. It is in the form of PDF files.
3) Video of How to Care for Elderly Muslims with a Depression Disorder. This is presented in 2 Languages - Thai and Malay.
4) The Depression Risk Assessment Form is a menu for volunteers to apply to elderly Muslims in their village. The volunteers will have to assess the elderly Muslims individually. After the volunteers have completed the assessment of the elderly Muslim, they select the "Register" menu to enter the assessment, starting with the 2Q assessment. They select "Send answer" when the response has been submitted. If the screening results indicate a degree of risk, the system sends a message saying, "You have a risk of depression". If this happens, the volunteer has to do the next questionnaire. Alternatively, the system states: "You have no risk of depression". If so, the volunteer presses the "Finish assessment" button.

5) After the words "You have a risk of depression" appear, the volunteer has to complete a 9Q questionnaire, the results of which will tell them if the elderly person is at risk or not. If the system states "You have a small or large risk of depression", then the volunteer will take the test again.

6) After completing the 9Q questionnaire and it is stated that "You have a small or large risk of depression", as measured by the 9Q>= 7 score (Department of Mental Health Ministry of Public Health, n.d.), the final test is completed: questionnaire 8Q, so we will get the result of the level of depression risk by selecting the "Send answer" button.

7) The post-study quiz is a menu for volunteers. They undertake self-assessment after gaining knowledge from the Lesson Menu aimed at their ability to assess the risk of depression in the case of elderly Muslims in the area because of studying through the application. After answering the question, the volunteer selects the "Send answer" button.

8) The Application Satisfaction Assessment Form is a menu for volunteers to assess assessment of the performance of the application, and how satisfied they are with it.

The screen accessed by the Health Workers (Admin) offers a system usage menu as follows:

1) The Lessons is a menu that shows the basic knowledge of depression.

2) Assign licenses to health workers. This is used to allow volunteers access to the system. The Health Workers (Admin) make a place to allow the user to log in. This is to prevent third parties from accessing the system inappropriately. Users who are allowed to use the system must be volunteers selected in each area. The Health Worker (Admin) selects the menu "Assign user rights".

3) The results of the risk assessment of depression is a menu for the Health Workers (Admin). They can view the results of the assessment of the elderly. By selecting the main menu "Evaluation results " The Health Workers (Admin) can see a summary of which elderly people are at risk at the time of the assessment.

4) There is a menu of pre-training assessment results for viewing by the Health Workers (Admin). This is used to view the results of the first post-training test assessment of the volunteers, kept separate for each village for which the volunteers are responsible.

5) The results of the application satisfaction assessment are a menu for Health Workers (Admin) to view. These are the results of the satisfaction assessment of the volunteers on the use of the system in each area.

Step 3: Development

The development of the mobile-learning training kit is done through mobile-programming by storyboard with the use of the Ionic 3 software program. When the training kit is created, the developer presents it to 3 content professionals and 3 educational technology media experts who individually assess the quality of the kit. It then uses the media to determine its efficiency with a pilot sample of 30 individuals. This involves doing exercises and class and post-training tests. It was found that the average ratio of exercise scores between the training and the full exercise score ($\bar{E}$a) was 0.83. In addition, the ratio of the mean of the test score to the mean of the full score ($\bar{E}$b) is 0.81. The performance of 81.56 in terms of the mobile-learning training kit meets the criteria.   This led to the implementation process.

Step 4: Implementation

The training kits were delivered through powerful mobile servers and it was tested on samples in order to determine how effective the mobile-learning training kits were in terms of academic achievement. 33 persons accessed the training kit by installing the application on the Android operating system of their mobile phones. They were asked to start by taking the test before learning began. They were then asked to learn the training content of the modules and do exercises during

the training. The whole process took about 2 weeks. Afterwards, the volunteer was asked to go into the field to survey the elderly in Lamphu by using a form to assess the risk of depression. After training, the researchers were able to analyze the achievements of the training from pre-training test scores and post-training test scores using t-test dependent samples.

Step 5: Evaluate the use of training kits through M-learning.

This process consists of 2 phases as follows:

Phase 1: Formative evaluation in the form of expert assessment, involving content experts, educational technology media experts, and measurement and evaluation experts to determine how effective the mobile-training kit was in terms of performance.

Phase 2: Summative evaluation was undertaken after developing the mobile-learning training kit. It was evaluated using Likert's Rating Scale Satisfaction questionnaire, which incorporates 5 satisfaction levels (Srisarad, 1996). It included 2 areas of assessment in terms of content in technology transfer. There are 7 aspects such as content that is attractive and suitable for the elderly, diversity in terms of spiritual dimensions, clear content, content that is comprehensive and easy to understand, the quantity of appropriate content, whether the content is consistent with the objectives, whether the knowledge of technology transfer can be applied in everyday life, and whether the content is consistent with the user's lifestyle. It also considers the format and benefits of technology transfer in 10 areas: format, the size and color of appropriate letters, the clarity of images, sounds or letters, the modernity, creativity, quality of audio commentary, interesting content, illustrations with artistic techniques and appropriate meaning, continuity in terms of the subject, appropriate timing, correct use of language, being comfortable to use and useful to users. The questionnaires created by the researchers were assessed by the IOC evaluation experts, with the average of the IOC valuation list ranging from 0.67 to 1.00. Assuming that a question is contentious, it would be used as a question, then find the confidence value of the entire satisfaction questionnaire using the Cronbach's Alpha Coefficient Method (Worakham 2018). This indicated a sentiment value of 0.70. The satisfaction questionnaire was then applied to assess satisfaction on the part of the sample used, to find the achievement of the mobile-learning training kit. In terms of satisfaction with the mobile-learning training kit, a high level of satisfaction was found (Mean = 3.83, S.D. =0.66).

RESULTS

The performance of the mobile-learning training kits for assessing the risk of depression on the part of elderly Muslims using human security spiritual dimensions was determined. The results of the analysis can be seen in Table 1 below.

Table 1: *Performance of mobile-learning training kits*

Number of sample group	Mid-Test			Post-Test			Efficiency
	Total	**Mean**	$\bar{E}a$	**Total**	**Mean**	$\bar{E}b$	
30	26	21.45	0.83	20	16.12	0.81	81.56

As shown in Table 1, the ratio of exercise points to the full score for exercises ($\bar{E}a$) is 0.83, and the ratio of the test score to the full score of the test ($\bar{E}b$) is 0.81. This indicates that the mobile-learning training kits are efficient.

The academic achievements of village health volunteers on the mobile-learning training kits for assessing the risk of depression of elderly Muslims using spiritual dimensions with human stability were analysed and the results are shown in Table 2 below.

Table 2: *The academic achievements of village health volunteers using mobile-learning training kits*

Test	Sample (N)	Average	Standard Deviation (S.D)	t	Sig. (2-tailed)
Before training	33	11.79	1.96	12.48	.000*
After training	33	16.12	1.08		

Note * p< 0.05

As shown in Table 2, the pre-training score averaged 11.79 and the post-training score averaged 16.12. By comparison in terms of achievement in a series of training sessions through mobile learning it was found that after training, the post-training results were statistically significantly higher than the pre-training results at 0.05.

The volunteers are satisfied with the mobile-learning training kits for assessing the depression risk of elderly Muslims using spiritual dimensions with human stability, returning a very high mean (Mean=3.83, S.D.= 0.66).

DISCUSSION

Designing and developing mobile-learning training kits with digital storytelling for the assessment of depression risk on the part of elderly Muslims

The design and development processes were successfully achieved. This approach can be applied to village health volunteers to educate them about depression prevention, and can be used to teach elderly Muslims about how to avoid depression. The design includes: The ADDIE model in terms of content and media design. This is used to define the training kit structure by applying analytical content to blended media design. Paste screen elements using a table are used as the primary structure with a white and light blue background, black and white letters. The font type is the same throughout. We created a primary color, while a secondary color was used to separate content, quizzes, and exercises between verses. To access interactive content designed, we used a series of digital story telling training kits for assessing the depression risk of elderly Muslims using spiritual dimensions with human stability of which 81.56% was in line with Chuensombut & Jaengsaengthong, (2020). The design of the perspective for mobile learning has been defined regarding the use of color wheels. This indicates that 80% primary color and 20% secondary color should be used for graphics or photos accompanying the content. Screen layouts and design grids or tables were used as orientations to place the screen elements. Space was left in the screen and scroll areas and all letters used the same lines and font thicknesses. Content was sorted from general content to specific content, and text, illustrations, animations and videos were aligned with the recommendations of Moodley et al., (2022) and Eltalhi et al., (2021), who have developed mobile learning applications.

The BenKids app was used to teach vocabulary to preschoolers using a straightforward interactive screen design. This is ideal for preschool-aged children studying the vocabulary of letters, numbers, animal images, and colors. It helps children develop speaking skills. Like Yaacob et al., (2021), it offers visual teaching and learning methods to increase employee productivity in training associated with basic crude refining processes in the environment of the oil and gas industry (Okai-Ugbaje et al., 2020). It relies on visualization tools to increase learning levels, and develops critical

thinking with the use of Augmented Reality (AR) technology, in addition to content that primarily uses text and images (Arumugam & Noor, 2021). We have developed a computer-assisted language learning method called CALL to better recognize words. This allows learners to understand reading and to reduce the response time for vocabulary writing. It uses a computer-assisted teaching design that adds features including videos, music, animation, and graphics to help the user achieve better learning (Hendarwati et al., 2021).

Multimedia mobile devices are capable of teaching 21st-century skills, enabling collaboration, and solving problems. Creating interactions and problem solving patterns, enables learners to develop better problem-solving skills. However, Jamaludin et al., (2021) has developed a design pattern, diagnosing depression with the use of design techniques. Gamification has also been used in developing adolescent-specific mobile apps for self-diagnosing depression (Neamchu et al., 2019). The same procedure works in the same direction. Multimedia computer lessons have also been developed. Subject to spelling scales that do not meet the requirements of Thai language, courses for 2nd grade students are 84.00% effective and the designed instruction is based on Gange's teaching theory. The multimedia computer lesson contains a mixed content containing alphabetical content (Azi, 2006). There is text, images, sounds, and videos in each unit. There is an example of doing exercises during class, in the form of a learning game, and this can easily stimulate learners to want to learn. Students will obtain immediate feedback, in line with the research of Siriwat et al., (2017) which involved developing mobile web instruction using object-oriented programming for Java programming for undergraduates.

The results of the study are as follows: Developing mobile web instruction on object-oriented programming for Java programming for undergraduates proved to be 90.35% efficient. The lessons through mobile web designs correspond to Gaye's teaching theory in terms of the following: 1) Acceleration, use of graphics related to content, use of graphics with a large, clear size 2) identify the objectives using short sentences 3) review the existing knowledge using a knowledge quiz 4) present new content and choose illustrations, especially in key content sections 5) guide learning lessons through the mobile web and show the relationship of new knowledge content to the experiences students have had 6) provoke a lesson response as the students have the opportunity to choose a short reply or write a message 7) provide instant back-to-back information and interact with lessons via the mobile web 8) Test knowledge - the test measures academic achievement ranging from simple to difficult, and 9) summarize and apply while suggesting a relationship with previous knowledge or experience. Therefore, we can discuss the results of the researchers' work and the referenced research. The opposite procedure works in the same direction.

The learning achievements of village health volunteers using the mobile learning training kits

As a result of the use of the kits, post-training achievement is higher than before training. This is statistically significant at 0.05 (Marcel, 2019) with a sequencing content method. This involves sorting content in order of importance, from theory to hands-on. We reviewed the knowledge from the exercises to connect the content to new subjects, with students evaluating their knowledge through the system. This should be done immediately, before class, during class and after class. For analyzing sentiment values with the method of measuring consistency within the test we used Kuder-Richardson Methods (KR-20) formula in line with Siriwat et al., (2017). In terms of developing mobile web commands on object-oriented programming for Java programming for undergraduates, the results were as follows: a comparison of undergraduate achievement showed that the undergraduates' pre-exam scores were significantly different at 0.05, in line with research by Kongthong et al., (2016). By developing web-based training to replicate at least 90% of teachers' e-books, this research aims to compare the achievements before and after training using web-based training to create e-books for teachers. The results showed that trainees achieved higher results after training with web-based training on the creation of e-books for teachers under the

School District, Songkhla Province, with a statistical significance of 0.05. Therefore, we can discuss the results that the researchers and the referenced research have using the same method of conduct. In addition, it worked in the same direction.

Satisfaction of public health volunteers with mobile-learning training kits

This was done by using the participants' satisfaction questionnaire regarding the kit's suitability for assessing the depression risk of elderly Muslims using the spiritual dimension with human stability. Two areas of assessment were involved: content in terms of technology transfer, such as content that is attractive and suitable for the elderly, is consistent with the elderly lifestyle, and knowledge from the transfer of application technology that can be applied in everyday life (Trongtorsak et al., 2021). In addition, there is the format and benefits of technological depiction, such as the format, size and color of the appropriate text, clarity of the image, sound or letter, illustrations that are artistically technical and full of meaning, inter alia, to consider. These should be designed in accordance with Likert's Rating Scale which offers 5 satisfaction levels (Srisarad, 1996). The entire satisfaction questionnaire involved the use of the Cronbach's Alpha Coefficient Method, which had a sentiment value of 0.78. The average of 3.83 is consistent with the work of Siriwat et al., (2017) whose research has developed mobile web commands on object-oriented programming for Java programming for undergraduates.

The tool includes questionnaires seeking information on the satisfaction of undergraduate students regarding the development of reliable mobile web instruction at 0.91. The results indicate that the undergraduates involved have a high level of satisfaction. The development of mobile web directives on object programming for Java programming for undergraduates is at a "high" level which is consistent with the research of Kongthong et al., (2016). We have developed a web training kit on the creation of e-books. Teachers affiliated with Songkhla School District created a Likert Rating Scale Satisfaction Questionnaire with a confidence value of 0.92. The assessment is divided into four areas: web training kit instruction, content presentation, technical presentation of web training kits, and the benefits of web training kits. The level of satisfaction of the trainees with regard to the web training kits indicated a very degree of satisfaction with an average of 4.04

CONCLUSION

The mobile-learning training kit was used for assessing the depression risk of elderly Muslims using the spiritual dimension of human security and the ADDIE model design. As a result, the training kit was developed using mobile language. The development of the kit effectively followed the correct procedures, and responded well to the needs of village health volunteers. Some of the village health volunteers had no previous experience in caring for the elderly. However, there are relatives in communities with a risk of depression, so it was necessary to reduce such a risk. Knowledge should be given to village health volunteers about the causes of depression, the symptoms of depression, and how to prevent depression. There is the need for a guide to the transfer of anti-depressive technology, as well as video media conveying how to care for elderly Muslims at the risk of depression using spiritual dimensions with human stability. This needs to be provided in two languages: Malay and Thai, to assist both Buddhist and Islamic village health volunteers to assess depression risk. This should be done continuously via mobile devices before the onset of severe risk. This could reduce the incidence of suicides resulting from pressures of unrest in the area in addition to economic problems, domestic violence issues and influences from those closest to the elderly. In regard to the limitations, in a further study, the mobile-learning training kit should be adjusted so that it is available on all operating systems. In addition, there is a need to increase the practical skills measurement aspect in order to enhance the performance of mobile-learning training kits.

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