The Needs Analysis of The Development and Usability of The "E-Ibadah" Application in The Teaching of Islamic Education for Pupils with Hearing Disabilities

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Abstract
Special Education in Malaysia started in 1954 and it has provided opportunities for pupils with hearing disabilities to attend Special education under the Integrated Special Education Program (PPKI) until today. Various efforts have been carried out by the Special Education Division (BPK) Malaysian Ministry of Education (KPM) to help this group. This is clearly shown by the rapid changes in schools that make the teaching and learning approach of the 21st century (T&L) Islamic Education for Pupils with Special Needs also modified with today's technological developments. This study conducted a needs analysis survey on the development and usability of the 'e-ibadah' Application for teaching Islamic education for pupils with hearing disabilities in level two. This study is a quantitative descriptive study, and findings were reported using percentage, frequency, mean and standard deviation. The purposive sampling method was used to select 30 Special Education teachers from National Special Education Schools in Perak and Melaka. A survey was conducted to collect information about the gap in level two pupils' mastery of prayer steps and recitations and the need to develop the 'e-ibadah' applications. The questionnaire instrument was divided into five parts of Participant demographics, Internet Access construct, Instructional Media Module Requirements construct and Application Design Element. This study identified five themes from the study results, which provided an overview of level 2 hearing disabilities pupils' mastery of prayers. It was found that they have weak mastery of prayers' steps and recitations. In this light, teaching and learning using the e-ibadah smartphone application need to be diversified to attract pupils and increase their interest in learning. Teachers also need to be exposed to the e-ibadah Application to help them carry out more effective and meaningful teaching activities, attract pupils, and increase their interest in performing worship diligently and accurately.
Keywords: 21st Century Teaching, Special Education, Pupils with Hearing Impairments Pupils, Mobile Applications, Islamic Education

Introduction

The Special Education Division (BPK) of the Ministry of Education Malaysia (MOE) has taken several measures to ensure that the Teaching and Learning of Special Education pupils are in line with the current use of Information Technology (TMK). This is demonstrated by the rapid changes in schools that have led to a change in the teaching and learning approach of the 21st century (T&L) Islamic Education for Special Needs Pupils, especially pupils with hearing disabilities.

Previous research findings imply a positive relationship between computer knowledge, the level of application usage, access to computer and Internet facilities and the level of application usage in education. Alif & Surina (2014) opined that the use of mobile applications in Islamic education subjects increases pupils' interest. In parallel with the Sreerambhatla study (2010), the level of user satisfaction will increase when the mobile Application is generated when it coincides with the target group's needs. This study is also supported by the Ainun (2011), which suggests that the use of multimedia in the T&L Islamic Education of Special Hearing Pupils may further enhance the understanding of prayer in the subject of Islamic Education. This is in line with the findings of the Mesza (2021) and the Norshila & Norsidah (2021) study which asserted that the emergence of mobile learning or M-Learning has led to the rapid growth in educational technology, which has brought changes to the current education system which should also have developed the level of teaching in the classroom.

Problem Statement

This study has designed the 'e-ibadah' mobile application (MA) for teaching Islamic Education to pupils with Hearing Disability. This study has focused on analysing the need for this Application through the study of documentation and questionnaires. This study aims to design a specialised software that can diversify reference sources other than textbooks for T&L chapters of worship involving pupils with hearing disabilities. This software can solve the problem of lack of resources experienced by Islamic Education teachers, especially those who teach pupils with special needs and hearing disabilities. Most teachers acknowledged that the teaching materials in the school were not accompanied by the help of sign language support (The findings of the initial study instrument by researchers to 30 respondents of the Special Education Islamic Education Teacher (GPIPK) at SKPK, involving 15 teachers from Perak and 15 teachers from Kedah. This finding is supported by the study by Nik Hassan and Mustafa (2016), stating that the lack of teaching aids (BBM) in Islamic Education for pupils with hearing disabilities as most of the reference materials in the market are more friendly to mainstream pupils. The selection aspect of BBM is important to ensure that the learning and teaching process of Islamic Education subjects can be implemented more effectively (Nik Hassan, 2016). The problem of teaching aid materials (BBM) in Islamic Education subjects is difficult to obtain or not in the market. This study shows that the BBM in today's market is less suitable for pupils with hearing disabilities, as they are catered to mainstream pupils. This statement is in line with the views of (Siew et al., 2007).

The MOE also considers the lack of material in collaboration with the Curriculum Development Division responsible for publishing Special Education Textbooks for all primary schools in Malaysia in stages. This book is published in line with the Special Education Primary School Standard Curriculum (KSSRPK), an improved version of the Integrated Curriculum of

Primary Schools (KBSR). KSSPPK was implemented starting in 2011 KSSRPK Circular (2011), MOE) and covers core subjects. BPK has published Islamic education textbooks for pupils with hearing, learning, and vision impairments. The content covers the Quran recitation through the topics of fakih, worship, akidah, sirah and Jawi writing and sign language translation techniques. However, there is still a shortage of reference materials as textbooks are limited as a reference in schools. This aligns with the study (Nik Hassan, Mustofa, Abdullah & Mohd Yusof, 2016). Therefore, researchers have developed the e-ibadah mobile Application as one of the reference sources for teachers and pupils that can be accessed anywhere.

Special Education Teachers are the lifeline of and main agent in communicating information to hearing impairment pupils. In this regard, the teacher's teaching method also affects the pupils' understanding in understanding the subjects of Islamic Education with ease. In the interview sessions, teachers still use conventional teaching strategies in their T&L. Many studies showed that Islamic Education teachers practice T&L traditionally and use one way of communication and chalk. is also supported by the Research Report on the Effectiveness of Islamic Education Teaching and Learning Methods on Student Self-Development (2004), the monitoring report of the Curriculum Division of Islamic and Moral Education JAPIM (2005), as well as studies by (Hatifah, 2000; Hamdi et al., 2012; Shahida, 2015).

Hassan et al (2016) referred to Islamic Education and Special Education experts to recommend suitable materials for pupils with hearing disabilities during teaching and learning. This study recommended the provision of visual material which aligns with the ability of pupils with hearing disabilities as the main condition in determining the effectiveness of Islamic Education teaching; hence, the content provided should be user-friendly. In constructing BBM, Islamic Education Teachers (GPI) should examine the suitability of the materials with the ability of pupils with hearing disabilities and the need to build BBMs that embrace the hearing impaired. Among them is the use of pictures in Islamic Education. He suggested using pictures especially related to the worship section: "Many pictures of fardu worship such as prayer, ablution, the five pillars of Islam and the six pillars of Faith."

Furthermore, as technology advances, special education pupils are also not spared from using this information technology. Thayyib & Hanafi (2020); Siti Fatimah and Ab. Halim (2010) stated that the ability of teachers to use technology is an effective teaching approach that is aligned with the interest of the current generation toward the use of gadgets and communication tools. Thus, pupils with special needs need to be trained in communication skills, collaboration and problem-solving. In line with 21st Century Learning (PAK21), the Government of Malaysia has emphasised the no children left behind policy to achieve the seventh shift of the Malaysian Education Development Plan or PPPM 2013-2025. This includes the implementation of e-learning, as former Prime Minister Tan Sri Muhyiddin Yassin reiterated in his Teachers' Day speech on 16 May 2021. In this regard, no children, including Orang Asli and indigenous pupils, Special Education Needs Pupils (MBPK), and undocumented children, should be denied from having proper education, including learning based on information and communication technology (ICT). In this light, teachers play an important role in adapting technology-based pedagogical content as part of the 21st Century teaching and learning.

In addition, researchers are encouraged to design and develop T&L materials using e-ibadah applications as an alternative for special education as part of the new normal T&L approaches in facing the Covid-19 pandemic. The pandemic has also brought a paradigm shift from traditional methods to mobile applications. Teachers can engage all pupils in the lesson and curb computer illiteracy among them. As shown in a study by Hamdi et al. (2012), using visual resources can improve the T&L implementation in Special Education as recommended by (The National Deaf Children Society, 2004). Undoubtedly, most pupils today have access to smartphones, which provides a great opportunity to improve learning effectiveness through mobile education (Amin & Norazah, Ebrahim, 2013 ; Norlaila, Rosseni & Huzaimi, 2020). On 18 April 2017, former Education Minister Dato Mahadzir Khalid announced a proposal to allow pupils in Malaysia to bring devices to school to assist the teaching and facilitation process (T&L) in classes according to subjects, and the current education minister had continued this initiative. Although smartphones are not allowed at school, pupils can still use smart tablets and smartphones at home as a self-access tools. The use of devices in schools is in line with the 21st-century technology wave, as most developed countries already allow their pupils to bring them to school. This proposal opens up opportunities for educators in primary and secondary schools to build mobile applications for additional learning modules to existing reference materials and textbooks.

Pupils are more likely to explore and access the Internet during T&L at school. This statement is supported by a study by Shahida (2015), which found that 80% of the 15 pupils with hearing disabilities own a computer, tab, or smartphone at home, and 73.3% know how to access the Internet at home. This finding suggested that these pupils can study online, at home or at school at any time. Therefore, this Application can be used as a T&L method that can help and guide pupils with hearing disabilities. It can also be used as guideline to perform worship easily and correctly and increase access to reference resources and support online, especially in strengthening the basic knowledge of worship in the Islamic religion.

This study is in line with Ainun (2011); Shahida (2015); Norshila & Norsidah (2021) which suggests the use of multimedia and M-Learning in Islamic Education T&L for pupils with hearing disabilities can further enhance their understanding of the subject of Islamic Education. This is because multimedia can improve the memory of Special Education pupils, specifically those with hearing disabilities. This statement is supported by a Tileston (2005) study, which found that only 20% of pupils learn through hearing, while another 80% learn through sight and visuals. This is also stated in Abdul Rahim's writing in 2021, published in bhpendidikan@bh.com.my on 25 May 2021. According to him, teachers should use visual teaching techniques in teaching pupils with hearing disabilities, such as using video as a medium of communication, Malaysian Sign Language (BIM) or Malay Hand Code (KTBM) as a more interesting and effective T&L method. This study is in line with the findings of Abdul Samat & Rosadah (2020), which stated that pupils with hearing disabilities tend to memorise using visual senses.

Therefore, the use of educational applications in teaching Islamic Education to pupils with hearing disabilities is a new alternative to formal and informal learning of skills, information and knowledge. In the process, the use of the Application connects the pupils/teachers with the online reference source. This statement is supported by Zulazizi (2020), who stated that the development of multimedia-based software provides an

opportunity for pupils to determine the optimal way of learning and allow them to learn in groups, interactive or alone, similar to the findings of (Muslimin et al., 2018).

Other findings showed that animated and narrative presentations in multimedia are very entertaining and engaging as pupils can effectively remember verbal and visual channels in their memory (Basri & Lakulu, 2018; Wilson et al., 2015). Furthermore, it can promote active learning in tandem with the dynamism of interactivity between users and those multimedia elements Zaibon (2015) Undeniably, the various facilities provided in multimedia are either in the form of fast learning or learning while enjoying the pleasure of playing (Alimom & Azlan, 2019; Jamaludin & Tasir, 2001).

In addition, based on past studies, the use of this interactive Application can also increase pupils' interest in their studies, including Islamic Education subjects. This is seen in studies by (Faridah & Afham, 2019; Sri Wigati, 2019; Zaini & Razak, 2022). The findings of this scholar show that the level of interest of pupils in the subject of Islamic Education through this interactive application increases. This study found pupils' interest in interactive learning were relatively high. This clearly shows that this interactive app can increase pupils' interest in learning. This is supported by the Sri Wigati (2019), which shows that using media in the learning process has aroused pupils' learning interest.

Past studies have found many problems that arise during the implementation of learning and teaching involving pupils with hearing disabilities. These include pupils' low achievement in Islamic Education (Hassan, 2016 & Said et al., 2015). This is based on these pupils' low achievement in Islamic Education subjects (Examination Board, 2003). Studies from abroad have found that the academic achievement of pupils with hearing disabilities is still weak (Abdullah & Che Rabiaah, 2004; brooks & Baker, 2002; Moores, 2001; Shahrul & Ali, 2008). Similar conditions can be observed among pupils with hearing disabilities in Malaysia.

Based on the literature review, the researchers found that there are still gaps in preparing teachers to use mobile apps in the classroom to teach level 2 pupils about worship, especially special education with hearing disabilities. Therefore, the researchers intend to conduct a study by developing this e-ibadah Application to help teachers teach the chapter of worship level 2 found in DSKP. The T&L materials based on the e-ibadah Application to be built are a combination of hypertext and hypermedia features and sign language assistance support materials that are interactive, easy to use, and can be accessed at any time online and offline. T&L materials based on this e-ibadah Application are expected to help teachers and pupils with hearing problems perform worship properly, thus inculcating new norms for teachers and pupils to undergo online T&L more effectively, especially due to the Covid-19 pandemic. The Covid-19 pandemic has brought a major shift to e-learning, and most teachers must embrace it with open arms (Daily News, 2020).

Literature Review
Today's education technology focuses more on improving performance in teaching and learning. Technology integration in today's classroom focuses on solving performance problems through a systematic thinking perspective. The teaching process is no longer focused on a teaching platform but is diversified using approaches that can further improve the quality of teaching management in and out of the classroom. In general, Mobile

Applications or Mobile Learning are used in teaching Special Education classes through mobile devices such as smartphones in the teaching process to refer to and search for information.

Mobile App

Mobile Application or Mobile Apps(MA) is a program that is loaded into a mobile device and can be used anytime and anywhere (Rashedul & Tahidul, 2010). Various applications are specially designed for mobile phones to make it easier for users to contact friends, surf the Internet, manage files, organise schedules, and create simple documents and entertainment programs. In this study, mobile applications developed through mobile phones aimed to provide facilities for Islamic Education teachers to prepare for lessons. The effectiveness of the use of applications in T&L will also be evaluated.

Mobile learning or m-learning is a learning method where teaching and learning activities are conducted using mobile devices (Yong & Shengnan, 2010). According to Vavoula & Sharples (2002), the term 'learning' carries the meaning of mobile because learning can happen anywhere and anytime. Thus, combining the words 'mobile learning' and face-to-face shows that the learning process can be carried out around the clock and not limited to time and location only.

Common mobile devices used in m-learning methods include laptops, tablet PCs, PDA (personal data assistant), MP3 players, mobile phones, audio recorders and others (Kukulska-Hulme, 2005; Khairah@Asma Saedah & Faizal 2017). It also needs to be small and wireless to make it easier to carry anywhere (Zoraini et al., 2009). On the other hand, Traxler (20097) does not categorise PC laptops and tablets as mobile devices because humans usually only carry small gadgets such as mobile phones, iPods or PDAs that can fit into bags to carry everywhere.

In addition, MA learning is characterised by mobility and enables learning that can happen anywhere and anytime (Aubusson et al., 2009: Taylor, 2006; Winters, 2006). The situation differs from using textbooks that are usually referenced at a given time only. In this regard, m-learning mobility and flexibility have received considerable attention in research (O'Malley & Fraser, 2004) as they can influence the users' learning experience.

By using MA-learning, the learning process is no longer concentrated in one platform or limited to a classroom and has become more structured. In this regard, M-learning is categorised into just-in-time, just-in-case, on-the-move and on-demand (Traxler, 2009; Neyem et al., 2012). This shows that the use of mobile devices is easier to make learning happen anytime and any place, compared to the use of perishable and non-sustainable notebooks (Sobri, 2010)(Shafiza, 2007). This situation suggests that mobile gadgets such as phones, Pocket PCs and others have advantages over materials of a conventional nature.

Results of past studies have suggested that the teaching methods and processes should be updated and planned according to the current circulation and development by creating a conducive learning environment to increase the interest of pupils with hearing disabilities to learn the prayer and practice it correctly and based on the Quran and al-Sunnah. According to Nofrizal (2006), the learning environment will also affect the pupils' interest in teaching and learning. Special Education

Teachers also need to plan the teaching of Islamic Education in the classroom towards creating a positive attitude in influencing the motivation of Special Education pupils, thus increasing the understanding of the topic of worship, especially prayers. Special Education teachers also need to use the latest virtual technology resources, such as communication technology and certain gadgets, to diversify teaching and learning methods in the classroom, as children are growing up in a challenging environment with cutting-edge technological advances and the development of gadgets that greatly affect their social lives. This phenomenon should be taken into account by educators, especially Special Education teachers. In this regard, technology use can increase pupils' interest in learning Islamic Education. According to a study by Azman & Zakaria (2021), the need for technology is increasing. There is a high demand in various fields, including Special Education, in line with the concept of 21st-century learning and the development of industry 4.0

Teachers' readiness to apply this mobile technology is an important aspect of adopting MA-Learning in teaching and learning. Teachers' willingness to use MA-Learning in teaching and learning is important to ensure that teaching and learning objectives are achieved. Sobri et al (2018) found that lecturers' readiness significantly influences mobile learning use at the Institute of Teacher Education of the Northern Zone. Teachers are the main agents in the successful Application of technology Papadakis (2018) and play a key role in implementing MA-Learning using relevant pedagogy (Miglani & Awadhiya, 2017).

Based on past studies and scholars' views, the researchers found that the need to build alternatives for e-ibadah application-based innovation is appropriate to help pupils with hearing disabilities. The T&L materials based on the e-ibadah app built will have hypertext and hypermedia features along with sign language assistance support materials, are interactive, easy to use and can be learned at any time. T&L material based on APP e-ibadah is expected to help teachers and pupils with hearing disabilities perform prayers properly and practise it in their lives.

Brown's Model of Learning
MA-Learning is the result of a combination of face-to-face methods, distance learning (d-learning) online learning (e-learning). The combination of these methods makes learning users more flexible and mobile. This will make the education field more sophisticated and keep up with current developments. This MA-Learning concept is explained more comprehensively based on Figure 1 below :
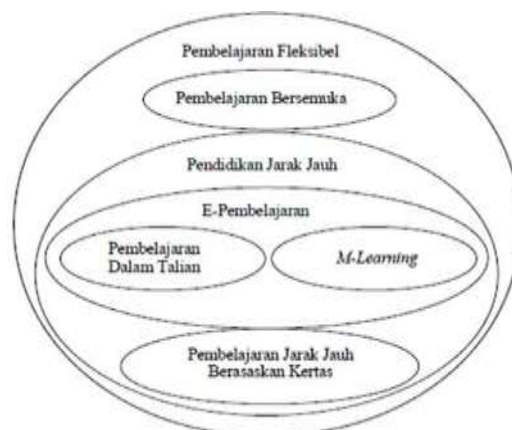
Figure 1: Brown's Model of Learning
Source: Brown (2005)

Brown's Model of Learning explains the concept of MA- Learning. According to him, M-Learning teaching and learning is a subset of electronic learning. In this light, electronic learning is a macro concept that involves the MA-Learning learning environment. According to Brown (2005), pupils can also carry out individual or group learning activities such as surfing the web, accessing programmes or learning through examples of problems provided. This statement shows that pupils can access learning easily, and the teacher can provide interesting materials.

The Theory of Multiple Intelligence
The Multiple Intelligence Theory was chosen because it provides opportunities for varied teaching and learning methods. The use of different methods in teaching is the most important foundation to increase motivation and interest in student involvement in teaching and learning sessions (Moores, 1987). This Multiple Intelligence Theory can increase the interest of educators in producing various teaching strategies to cater for pupils with various learning styles (Klein, 1997). According to Jasmine (1996), elements of multiple intelligences can be integrated into learning activities in a subject to achieve learning objectives and develop intelligence relevant to the learning topics. For example, Tezer et al (2015) found that pupils with logical intelligence achieved high achievement in Geometry. The study asserted that it is necessary to include the types of intelligence suitable to the topic taught (Jasmine, 1996).

Many researchers have found that applying elements of diverse intelligence in teaching and learning significantly impacts pupil achievement (Delgoshaeia & Delavaria, 2012; Soleimani et al., 2012; Sorin-Avram, 2014a; Stanciu et al., 2011). The Delgoshaeia & Delavaria study (2012), which applied the intelligence approach to various early-childhood education, proved that applying such approaches could increase the five cognitive domains of respondents in percentage (99%). The same applies to the Stanciu et al (2011) study that used the Theory of Multiple Intelligence in the teaching and learning of pupils with learning difficulties. The findings showed an improvement in academic achievement among them.

Methodology
This study used the descriptive quantitative survey method to collect data that provides a clear and accurate picture of the need for the construction of e-ibadah applications for pupils

with hearing disabilities at level 2 of National Special Education Schools (SKPK) to learn specific acts of worship. The study population consists of 30 teachers from SKPK Perak and Melaka, and data were collected using document analysis, interviews and questionnaires. This methodology was used by Mesza (2021) in his study of the development and evaluation of the Application of sign language learning modules (m-isharah) for undergraduate special education students. The sample was selected to obtain accurate information and follow the requirements of the study (Creswell, 2014; Ghazali & Sufean, 2018, Tarmizi, 2020). The study sample comprised 30 Special Education teachers who taught year 4 and 5 pupils at SKPK Perak and Melaka. All respondents were selected based on more than five years of experience teaching Special Education (Akbari & Yazdanmehr, 2014). The study used questionnaires. The questionnaire consisted of four sections, namely, items in part A are related to the participant's demography, items in part B related to Internet access, part c is related to requirements for constructing a media teaching model and part D is related to the design elements of the Application. These general interview protocols were divided into three parts, A) items related to the respondent's background, B) Items on the use of Sign Language Learning Applications via Smartphones, C) closing questions aimed at strengthening the analysis of the research needs of researchers and respondents (Creswell, 2014). The items in the survey questionnaire were reviewed by linguists and Special Education content experts to verify their validity and reliability. Researchers have made amendments based on the recommendations of specialists and removed unnecessary items. For sampling, the researchers referred to the Krejcie and Morgan (1870) sample size determination table and a total of 30 teachers were selected from the population. This study was analysed using the method of analysing data using the Statistical Package for Social Science (SPSS) program. Descriptive methods are used, and all data has been analysed and displayed in tables showing frequency and percentage. In this study, researchers used descriptive analysis to answer and discuss all findings.

Results and Findings
The Level of Internet Access in Schools

In general, the results of this study showed that most of the respondents have access to devices such as smartphones, laptops, tabs and computers, and most own a smartphone. This is evident in the results of the questionnaire analysis, which showed that the mean score for all items related to having a gadget is more than 4.0. Moreover, almost all respondents agreed or strongly agreed that they use gadgets as additional tools in teaching Special Education.

Most respondents have good internet access at home, and only a few face a slight interruption in their Internet access. This shows that they can download and upload materials for teaching and learning purposes. In addition, the results from this study also showed that all respondents could access the Internet in Special Education schools and had only a small amount of interference in schools as a field to search for information and subsequently conduct teaching and learning as MA-Learning. MA-Learning allows teachers to diversify their teaching and learning strategies to promote learning. This is supported by Gary (2013); Syar (2021) based on studies that have been conducted showing that interesting teaching and learning applications will help pupils and pupils with hearing disabilities in generating knowledge and understanding learning better. In addition, these pupils can generate more ideas and responses during teaching and learning. This is because hearing-impaired learners can communicate using sign language more effectively through this MA-Learning learning.

MA-learning can also help students understand every lesson and solution step and facilitate pupils with hearing disabilities' understanding of important learning concepts at school and home.

In addition, the findings showed that most of the respondents never downloaded materials related to prayer, fasting or other chapters of worship in the pupils' T&L using the play store or app store. This reinforces the research analyst's analysis that there is a rift in the production of teaching aids specifically for teaching acts of worship for disabled pupils in Malaysia. Therefore, teachers of Special Education need to diversify their teaching and learning activities to be more interesting, especially in BBM and MA learning. The use of MA-Learning will allow teachers to learn new knowledge according to the current technological developments. This is in line with the findings in Aliff and Isa (2013) on using smartphones in teaching and learning. Furthermore, it can engage students in learning Islamic Education due to their positive attitude toward using technology. They agreed on the potential to develop a mobile-based app after receiving a positive response from respondents on the use of technology in learning

The Needs for Developing Mobile Application Media Teaching Module (Ma-Learning)
As shown in the study's findings, the respondent agreed that the worship chapter is contained in the Standard Curriculum and Assessment Document level 2, specifically for pupils with hearing disabilities in special education schools in Malaysia. Most respondents chose the topic of worship as the topic that should be given the most priority in teaching, compared to other topics like tilawah, adab, akidah and sira is very high. While for the subject of worship, most respondents chose the the topic on prayer, followed by fasting and zakat. Items related to these elements have recorded a high mean score of more than 4.0. This shows that teachers chose worship as the most important topic to teach using the MA-Learning mobile application.

The study's overall findings found that teachers agreed with the need for specific worship chapter reference resources for pupils with hearing disabilities, such as mobile phone or tablet apps that make it easier for pupils to find references. Teacher can also use the MA-Learning app to find information, and teaching and learning materials and access specific applications related to special education. This will help teachers of Special Education with Hearing Disabilities to integrate materials to build teaching and learning activities in and out of the classroom. This is supported by a study conducted by Hafiza et al (2015) which states that mobile learning refers to learning environments that occur in various locations within an unlimited duration of time and consist of learning materials from various sources through mobile devices such as tablets or smartphones.

Through this section, the findings can be seen that teachers of Special Education with Hearing Disabilities agreed to the production of BBM chapters of worship that are assisted by the hand code of the Malay language or sign language. This is supported by Syar Meeze (2021), which thinks that sign language is a form of communication used by the hearing impaired, such as the Malay Handcode (KTBM) Izz (2006). These findings also support the opinion of Hartshorne and Ajjan (2009), who state that information technology can help improve the teaching and learning process and the interaction between teachers and pupils in or outside the classroom. This will help improve two-way communication between teachers and Special Education pupils.

Design Elements of E-Ibadah Application for Pupils with Hearing Disabilities

Based on the analysis of the teacher's response to the design of the MA-Learning Application as an auxiliary material in the teaching of Special Education classes, the teacher chose writing formally over informally. In addition, most teachers choose menu styles using headings and sub-headings over the grid, i.e. headings only. They also tended to choose black writing colours over other colours to avoid colourlessness, writing size 14 and above, blank background and light blue over other colours and respondents also suggested using additional multimedia materials that could help pupils with hearing disabilities learn comfortably. In this regard, the MA-Learning Application is used as a medium of reference and search for information related to the teaching and learning of worship chapters in Special Education classes at any time. M-Learning can also help teachers increase pupils' interest in learning disabilities. This is supported by Marcelo et al (2016), mobile devices can inject positive emotions into pupils. The use of applications in M-Learning can affect pupils' emotions. This will make pupils feel more excited about learning, focused, and enthusiastic about Mathematics. In addition, MA-Learning teaching and learning can positively impact Special Education pupils, especially pupils with hearing disabilities. They are more excited and passionate about conducting technology-based teaching and learning activities. This situation creates positive emotions that can motivate the student to learn particular topics. These positive emotions will also be able to influence the daily activities of pupils of Special Education. Therefore, using MA-Learning technology in learning can help teachers increase the interest and readiness of Special Education pupils (Norshila & Norshidah, 2021).

Discussion

This study was conducted to develop an MA-learning application for pupils with hearing disabilities of the chapter of worship, specifically the obligatory prayer. The Application's content to be developed is based on the Islamic Education Standard Document on Hearing Problems set by the MOE BPK and adopted in the national schools of special education and special education programs integration only. The researchers are hopeful that this study will benefit the pupils of Special Education with Hearing Disability and those involved in Islamic Education subjects. This Application plays a very important role in quickly channelling information to users. According to Zainah (2003), the government's goal to produce an information-rich society will be achieved with the availability of an informed web. The development of a specific application is urgently needed to increase the effectiveness of T&L Islamic Education subjects, especially for pupils with hearing disabilities. This can also meet the challenges of MOE in realising the Malaysian Education Development Plan (PPPM).

The app is expected to create a more comfortable learning environment for pupils. It can help them focus on learning, and they will be able to understand a topic learned more easily. This is supported by Yongjun, Guanglu & Nur Fadhilah, (2010) study, which states that applications in learning can produce an effective and efficient learning environment. It can also provide pupils with a more meaningful learning experience either on their own or in groups and with or without the presence of teachers.

The role of teachers in the classroom is not limited to channeling information. In this regard, the researchers also hope that with the availability of a specific app for T&L, teachers can play a role as a facilitator. It allows the teacher to pay more attention to the pupils and interact with them more often and model good values. In addition, this application can

simplify the teacher's teaching process. This is because this T&L based application provides information related to topic directly. Teachers can ask pupils to explore the information contained in the app on their own. The teacher's task will be much easier as the application can be used as BBM. In addition, the T&L process will be more interesting. The use of the app can also help teachers use Islamic Education learning strategies more interestingly and improve the effectiveness of learning.

However, because this study only involved respondents and limited study areas, the findings of this study should not be generalised to other populations. This study aims only to develop e-ibadah applications and not to test the effectiveness of T&L or differentiate T&L methods using applications with teaching processes without gadgets. The development of the e-ibadah Application aims to diversify BBM to help with the lack of resources to maximise the understanding of Special Education pupils and help them perform worship properly.

The app's development was based on technical requirements such as analysis, design, development, implementation and evaluation, or the ADDIE Teaching System Design model Nuriati et al (2015) using the www.createapp.com application. This application wase developed by researchers without the involvement of any party. Therefore, some flaws and shortcomings have been expected as the researchers have limited skills in this field. Therefore, the researchers feel that this application has many weaknesses, and the quality can be improved if the e-ibadah application was reviewed by a specialist or developed as a team.

Conclusion

Overall, the collection of materials through the analysis process in the development of the M-A Learning (Mobile Learning) e-ibadah Application has achieved the goals and objectives of the study. The materials collected have technical and educational strengths and can be used as reference material for pupils and teachers in making learning more attractive in line with the objectives of the development of e-ibadah applications. However, since the T&L material development process of the e-ibadah Application is still in its infancy, it also has some drawbacks from a technical and educational point of view. The main limitation in developing e-ibadah applications is the constraint of researchers' limited knowledge and skills on the functions and techniques of developing effective e-ibadah applications for pupils with hearing disabilities.

The researchers hope that with the development of this e-ibadah Application, learning will be active and motivated and encourage teachers and pupils with hearing disabilities to learn through ICT. Teachers and pupils are also expected to take advantage to fulfill the aspiration and objectives of PPPM. It can also change the perception of Islamic Education as a very boring subject and does not appeal to Special Education pupils and is difficult to teach for these groups.

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