

Teachers' Awareness on The Use of Technology in Teaching Islamic Education: A  
Study at Setiabudi Secondary School, Gombak, Selangor

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### **ABSTRACT**

This study aims to explore the awareness of Islamic education teachers on the use of technology in teaching Islamic education. Specifically, the objectives of this research are; to investigate the teachers' perspective on the use of technology-based teaching methods in teaching of Islamic education and to explore the teachers' usage of technology in teaching of Islamic education. This study is a qualitative case study using semi-structured interview to collect the intended data. Three Islamic education Teachers from Setiabudi School Gombak, Malaysia was selected through purposive sampling. The informants were selected based on their qualifications and teaching experiences, and the data were analysed using thematic analysis. The findings of the study revealed two major themes, namely the teachers' perspectives on technology based-teaching and the use of technology in teaching Islamic Education. The first theme indicates that the technology-based teaching refers to the use of technology as the teaching aids to help teachers deliver the lessons and to ease and facilitate the students' learning. The second theme revealed that the use of technology in teaching Islamic education should consider the appropriateness of the particular technology with the learning materials or teaching method. The study also shows that the Islamic education teachers need to have a strong belief on the use of technology, considering the availability of the students accessing the technology; and the school must support the current needs toward technology based-teaching.

Keyword: Teachers' Awareness, Technology, Teaching Islamic Education

### **INTRODUCTION**

In modern times, the science and technology has positive and negative effects upon everyone, especially students. Technology is important as a learning method for all levels of learning, whether at primary, secondary or university levels. (Balalle and Weerasinghe, 2021). We can leverage technology extensively and quickly for getting information, educational purpose, and even we can experience the usage of technology in all aspects of our life. (Roy, 2019).

In education sector, technology is growing rapidly. Advances in the field of educational technology are seen to be very helpful in improving the effectiveness of teaching and learning process. The discussion will focus on the use of teaching aids that can be applied in teaching and learning, especially in Islamic Education (Gray at al., 2021). In fact, technology has become an integral part in the contemporary education where a million of information can be found at our fingertip. Students in the 21st century era as the digital natives are significantly different from their parents and teachers, who are digital immigrants. (Fatimah and Santiana, 2017). Hence, Information and Communication Technology is a major field in the millennium era after leaving the agriculture and industrial period. Today, technological literacy is a prerequisite towards becoming knowledgeable individuals because only through technology one can explore useful knowledge and overcome all the modern life challenges (Raja and Nagasubramani, 2018).

However, using technology does not mean that computers can completely replace the work of teachers (Abi, 2016; Vasiliy, 2018). What needs to be emphasized is that traditional methods such as chalk and talk if integrated with modern technology will produce robust and effective results without sacrificing the aesthetic values that exist in individuals. As commonly known, if a teacher uses traditional methods, it is not only boring for teachers but also students feel bored and eventually the teaching objectives are not fully achieved. (Vasiliy, 2018).

In the context of the development of technology in education, the Malaysian Ministry of Education is taking a new step towards realizing the vision of the country by providing future generations with technological knowledge. Thus, Computer Aided Teaching and Learning (CATL) has been formed. This teaching involves computer applications to achieve teaching and learning objectives. (Alibasyah and Abdullah, 2017). The rapid changes in technology present major challenges to the teaching profession. Teachers need to be prepared to improve their knowledge and skills to replace conventional approaches that are less based on technological innovation. To achieve the future goals of education, every teacher needs to be proficient with technology. Skills in technology are an important criterion in the 21st century education system (Fatimah and Santiana, 2017).

Therefore, from the points above, the question arises about how to use technology in Islamic education in secondary schools, and to what extent teachers are connected to using technology in their Islamic Education classrooms.

## **PROBLEM STATEMENT**

Islamic Education teachers are those who are responsible for conveying Islamic Religious Education, a compulsory subject in primary and secondary schools. (Tamuri, 2017). In Elementary school, Islamic Religious Education subjects are allocated 180 minutes per week or equivalent to six hours of teaching in Grades 1 to 6. The National Philosophy of Islamic Education states, "Islamic education is a continuous effort to impart knowledge, skills and appreciation of Islam based on Al-Quran and As-Sunnah to form attitudes, personality skills and outlook on life as a servant of God who has responsibility to develop self, society, environment and country towards achievement goodness in this world and eternal prosperity in the hereafter." (Kementerian Pelajaran Malaysia, 2005). Therefore, teaching method employed in the classroom is one of the main concerns in the teaching and learning process using technology in teaching Islamic education (Khadijah *et al.*, 2014; Aqsha *et al.*, 2011). The method used is not only to help students gain knowledge and

effectiveness in using technology, but teachers should monitor students in using technology in learning so that it can have a positive effect on students (Shah, 2013).

Nowadays, many Islamic educational institutions such as Madrasahs, Islamic colleges, and universities still use the traditional teaching methods (Napitupulu, 2020). The lack of use of technology in teaching and learning process in Islamic education teachers are associated with the passive teaching methods, lack of motivation, and insufficient teaching time (Kementerian Pelajaran Malaysia, 2005).

Based on the above discussion, the researcher argues that there is a need to empower the Islamic education sector towards technology-based teaching and learning to enhance the effectiveness and the good outcomes of the educational process. Hence, the researcher aims to conduct study on the use of technology among Islamic Religious Education teachers in Setiabudi School, Gombak.

According to the literature, in this modern time there were some previous research conducted regarding the use of technology in Islamic education and its effects on the performance of of Islamic Education teachers (Suhid, et al., 2021; Shuhari et al., 2021; Alibasyah & Abdullah. 2017; Norfarahi et al., 2021; Juwita et al., 2021). They found that there are some difficulties faced by Islamic educational institutions to apply technology-based education, such as lack of resources and teachers' qualification. In addition, Shuhari, et al (2019) conducted library research about the study of Islamic theology in today's era by implementing the latest and advanced technology. The study concludes that the role of contemporary technology for the current situation is obviously fundamental, such as augmented reality (AR) and various games, in order to explain and facilitate the leaning of Islamic theology. Moreover, Eraku, et al (2021) explored the Islamic religious teachers' qualifications on their understanding about ICT-based learning in the current digital age. The study found that the teachers still need to improve their qualification and skills in implementing ICT-based learning in their classroom and reducing the use of textbooks. Zulkifli, et al (2021) conducted survey among polytechnic Islamic Education lecturers, and they found that the level of creative teaching practice of the lecturers is at a high level; however, it is hoped that they can be more creative. Another study conducted by Saputri, et al (2018) found that the students' participations and motivation in learning are increasing if the teachers implement technology media in the classroom.

The importance of this study is to identify whether Islamic Education teachers have interest and confidence in using technology. Researchers mentioned that if they have interest and confidence in technology, then there are other factors that hinder the use of technology in teaching and learning of Islamic Education subjects.

Theoretically, this study is expected to contribute to the development of Islamic Education, especially in Malaysia, in the use of ICT as a teaching material in the teaching-learning process. In practice, this research is expected to provide new information for the development of teachers' ability to use ICT in the teaching-learning process. The results of this study are also expected to provide input to relevant school institutions in particular and Islamic Educational Institutions in general in increasing the capacity of Islamic teachers.

Based on the previous studies discussed above, the problems highlighted were not related to the teachers' awareness on the use of technology in teaching Islamic Education, specifically in Secondary school level. Therefore, the present study aims to explore the teachers' awareness on the use of technology in teaching Islamic education at Setiabudi Secondary School.

## **RESEARCH OBJECTIVES**

The present study aims to investigate the teachers' perspective on the use of technology-based teaching methods in teaching Islamic education; and to explore the teachers' usage of technology in teaching Islamic education.

## **LITERATURE REVIEW**

### **TEACHING AND LEARNING WITH TECHNOLOGY**

Based on the literature related to teaching of Islamic education with technology, it is found that several studies have been conducted (Asmawati, *et al.*, 2021; Nawi, *et al.*, 2015; Hamzah, *et al.*, 2009). According to Asnawati (2021), the use of technology in teaching Islamic education contributes to strengthening and to create new innovation in teaching methods. The innovation then contributes to the transformation of Islamic educational system. Moreover, Nawi *et al.* (2015) conducted research on the use of cell phone in teaching religious subjects. The findings of the research revealed that the teachers can facilitate the students with various learning activities by using cell phone, and teachers made cell phone as m-learning for the students. Another study from Hamzah *et al.* (2009) reported that in Smart Schools, computer-based teaching plays a major role in transforming the phenomenon and school environment. However, besides its huge impacts on the educational system, the finding of the study also revealed that the teachers and students faced many challenges in adapting with the latest and advanced technology in the class room. In addition, lack of facility, lack of sources, less training, syllabus teaching, and examination-centred learning are some other barriers that identified in implementing computer-based teaching in Islamic education system.

Since the late 20<sup>th</sup> century, the technology-based learning has rapidly developed, this development has also forced the educational system to change accordingly. This is due to the huge impact of technology towards educational system which able to provide an active, easy and accessible teaching and learning environment. In this modern era, the whole nations across the globe put their priorities in the development of human resources and providing facilities to fulfill and enhance the technology-based education.

Lots of budget has been placed by those nations to fulfill the needs of the schools in order to improve their education systems. However, despite all the efforts from the nations, they still face many challenges of implementing technology-based education, such as the qualification of teachers in the use of technology that affect the effectiveness of teaching and learning. (Albirini, 2006). This problem is a serious matter and should be put into the account that all teachers need to be qualified to implement the technology in their teaching due to its huge impact on the effectiveness of teaching and learning, such as improving students' achievement (Nakayima, 2011, Jamieson-Proctor *et al.*, 2013).

The era of 21st century is motivating people to use technology since it brings us much easier and less time-consuming environment in our daily life. It is shown as a basis of development of a financial system. A financial set-up which is weak in technology will not grow in today's scenario. The effect of technology touches on every possible area. One such area is education.

There are many objectives of using technology in educational system, for instance, to learn basic computer skills (technological competency), to serve as an information tool (to research and process information), and to serve as learning tool (to practice knowledge and skills) (Tondeur et al., 2007). Supporting Tondeur, Downes *et al.* (2001) reported that the teachers' integration of ICT is to develop their skills, to implement technology as teaching aids to provide materials and learning goals, and to change the educational content and pedagogy in order to identify the beliefs that intend to create any transformation on the existing curriculum practices.

In addition, Ertmer's (1999, 2005) conducted a research that focus on exploring the relationship between beliefs and practices for technology integration. He argued that there are three categories of beliefs about the role of ICT in teaching and learning: (a) Technology is a supplement tool to the existed curriculum where teachers can implement technology to motivate students, reinforce their understanding, and practice subject skills; for instance, the practice of mathematical facts. (b) Technology is used to enrich the required curriculum where teachers implement technology as teaching aids, for instance, to enhance collaboration among students, and higher order thinking. (c) Technology is implemented to facilitate the proposed future curriculum where teachers make technology as a tool for 21<sup>st</sup> century literacies to transform the way students learn.

Additionally, Mama and Hennessy's (2013) also identified other two goals categories of the technology usage: the first one is functioned as administrative tools, and the second is a subversive function that aimed to avoid the use of technology in classrooms. The current trend shows us how exactly teenagers choose to use technology and how it affects their study. They also find how interactive and convenient the technology is when it comes to learning and knowledge seeking activities in a classroom setting

## **ADVANTAGES AND DISADVANTAGES OF TECHNOLOGY-BASED TEACHING**

According Kumar (2018), teachers are facing enormous challenges in this modern era due to the rapid changes and development of knowledge and ICT. The current modern era urges the teachers to be capable and qualified in implementing ICT in their classroom in order to encourage an effective teaching. Hence, to create such qualified teachers, the continuous training for teachers should be provided and increased. Similarly, Gressard & Loyd (1985) asserted that teachers need to have good attitudes and belief towards using computers in the classroom to enhance the successful and effective implementation of technology in education. Because, according to them, the negative attitude towards computers may lead to ineffective and unsuccessful computer-based projects. In addition to this, there are also some common difficulties that experienced by the teachers, such as lack of time, lack of expertise, lack of resources, and the most crucial thing is lack of support.

Following what Gressard & Loyd have mentioned, Butler and Sellbom (2002); Chizmar & Williams (2001) also highlighted another barrier of technology implementation, which is reliability. This reliability is correlated with the quality of the facilities and infrastructure, for instance the failure of hardware, incompatible software that available at school which connects the home and school, and poor internet connection.

Evidently, using technology in teaching and learning has both advantages and disadvantages. According to Kumar (2018), Some of the advantages are; technology

increase the students motivation which makes them excited to learn; it makes the students' timetable more flexible; technology provides them freedom to do many schools assignments at home, ICT also encourage students to develop their skills in using latest and advanced technology; technology also could save money and cut the school's budget by decreasing the usage of paper and photocopying costs.

In addition, besides its valuable advantages, technology also comes along with some disadvantages for educational sectors, such as affecting students' imagination, costs lots of money to install an appropriate technology, and also can contribute to the health issues when it is used excessively. (Kumar, 2018).

## **TYPES OF TECHNOLOGY-BASED TEACHING**

### **Use of Computer in Education**

According to Professor Murati (2017), the use of computer in the classroom encourages the transformation of educational concept, for instance: content of teaching, teaching aids, and interaction of teachers and students. Murati also asserted that in the contemporary teaching methods, computer-based teaching plays a major role in developing educational system, enriching the learning materials, saving time, and to fulfilling the current needs and interests of the students. Nowadays, there are many advantages of using computer in teaching and learning that have been experienced by the teachers, such as relieve the process of delivering information to the students through various programs, for instance, Power Point, Word, Excel, Flash Player, Adobe, etc.

The emergence of ICT in this modern era has comprehensively influenced the whole aspects of life. Hence, educational sector needs to implement the ICT in the system which should be started from preparing the youth generation to have a good attitude towards technology. To achieve these goals, the youth need; to possess good skills in communication, to be open-minded and to welcome in learning new things (Murati, 2017). The major impacts of technology on education, for instance, could be seen from the positive effects of computer-based teaching towards students. By using computer in the classroom could easily construct the new information and expand the skills of the students.

### **Cell Phones**

A cell phone is one of the current technologies that the school ages commonly uses. The students like to use cell phone due to many features that they can access from, such as recording videos, taking photos, and accessing internet and social media. Nowadays, there many sources of information that can be accessed from scanning the QR codes which only can read by using cell phone. Some schools also create the schools' materials or assignment this way to link the students' projects with the class or school's website. Cell phone is also considered to be the best alternatives of using technology in classroom due to less expensive compared to other devices, such as computer PC, tablet, and laptop (Nawi, *et al.*, 2015).

### **Using a Projector in the Classroom**

Another type of technology that could be very useful in the classroom is projector. According to the Pallikuttam (2018), the teachers can use projectors to create learning materials that can be presented from projectors, for instance, showing videos, PowerPoint presentations, and so on. For students, projectors can be very helpful in presenting the learning materials which enable them; to take notes easily by looking at

the projectors; and to enhance their attentions towards the information displayed in the slides. Pallikkutam, moreover, asserted that projectors also can replace the traditional teaching method that based on talk and chalk by displaying the information through slides.

## **METHODOLOGY**

### **RESEARCH DESIGN**

This study was administered through qualitative approach where it lets the participant feel their experiences in their own words and understanding; hence this approach deals with the participant's subjective experiences because everything will be analyzed according to their point of view.

The qualitative research method employed a semi-structured interview which was utilized to gain more in-depth information regarding the use technology in promoting in Islamic Education area. Boyce (2006) points out that qualitative research method involves conducting individual interviews intensively with a small number of participants to explore their perspectives on a particular idea, a program, or a situation. This research main aim is to explore the use of technology in teaching of Islamic education adopted by Islamic Education.

### **POPULATION AND PARTICIPANTS OF THE STUDY**

The population of the study is the teachers of Setiabudi Secondary School located in Gombak, Selangor. Purposive sampling technique was used to select the sample of the study. Purposive sample is a non-probability sample that is usually selected based on the characteristics of a population and the objectives of the study. It is also known as judgmental, selective, or subjective sampling (Crossman, 2017).

The Secondary School Setiabudi, located in Jalan Gombak, was selected for the study because it is one of the excellent and high performing schools in Selangor. It has been operating since 2005, and currently has about 550 students. (Hayati, 2021).

Three Islamic education teachers from Setiabudi Secondary School were selected to participate in the study. They were selected based on their qualifications, experiences, responsibilities, and their involvement in teaching Islamic education in the school. They would be able to provide more detailed and in-depth information related to the research objectives (Creswell, 2014; Patton, 2002).

### **DATA COLLECTION**

The data collection of this study was conducted in three different days where the researcher met the participants at school. The researcher provided an informed consent for every participant to sign and to explain some of the rules regarding their participation in the research. The information they provided would be kept confidential and used for the research purpose only.

Besides that, every participant was interviewed individually to get the best response based on his/her own experiences. There was no time limit for interview questions so as to enable the researcher to gain in-depth information about their interested area in the session. Additionally, several probing questions were also asked to obtain in-depth information from the participant. The interview session was conducted based on the participants' language preference which is Bahasa Malaysia.

Subsequently, all interviews were recorded using a voice recorder to facilitate the researcher in transcribing the data and analysis.

### **The Interview Process**

The main focus of this study is to answer the research questions which was obtained from in-depth interviews with the Islamic education teachers of Setiabudi secondary Schools. Creswell (2014) highlights that in the qualitative interviews the researcher asks open-ended questions to one or more participants to get more useful and detailed information.

In this study, the semi-structured interview was implemented. It is one of the main types of interviews that gives participants a degree of freedom to express their thoughts and opinions on the topic under investigation. It also helps the interviewers to probe for further information, elaboration, and clarification of responses (Creswell, 2014).

The researcher used a self-developed instrument that contains several interview questions aimed to explore; first, to investigate the teachers' perspective on the use of technology-based teaching methods in teaching of Islamic education; and second, to explore the strategies of the teachers in using technology in their teaching. To be more specific, this research tried to answer the following questions:

- 1) What are the teachers' perspectives on the use of technology in teaching Islamic education?
  - a) What do you understand about technology based-teaching?
  - b) Do you think that teacher needs technology in teaching Islamic education?
  - c) Do you think that technology could help teacher in teaching Islamic education? How?
  - d) What are the advantages of using technology in teaching Islamic education?
- 2) How do the teachers use technology in teaching Islamic education?
  - a) How often do you use technology in your teaching?
  - b) What kinds of technology do you use in your teaching?
  - c) What is your strategy in using technology during your teaching? Could you explain the step-by-step process?
  - d) How does technology ease your teaching?

### **DATA ANALYSIS**

The researcher applied the thematic analysis (TA) approach that emphasizes pinpointing, examining, and recording patterns (or "themes") within data. Themes are patterns across data sets that are important to the description of a phenomenon and are associated to a specific research question (Braun & Clarke, 2006). Furthermore, the themes become the categories for analysis. The thematic analysis is performed through the process of coding in six phases to create established, meaningful patterns. These phases are familiarization with data, generating initial codes, searching for themes among codes, reviewing themes, defining and naming themes, and producing the final report (Braun & Clarke, 2006).

To ensure the accuracy of the findings from the standpoint of the researcher and the participants or the reader of the account, the validity is required to be conducted as it is seen as the strength of the qualitative research (Creswell & Miller,



2000). Thus, the researchers took the transcriptions and the coding's extracts to the participants in order to verify the accuracy of the findings.

Reliability process is used to check the consistent pattern of themes development among several investigators or team in qualitative research (Creswell, 2014). To obtain this reliability, the researcher asked two PhD candidates of Education-IIUM to identify the main points of some questions of the two interviews on the coding form.

Generalizability is not far intended in the qualitative research. The sample was chosen purposefully only to provide some in-depth information on the teachers' awareness on the use of technology in teaching Islamic education.

## FINDINGS

This study aimed at exploring teachers' awareness on the use of technology in teaching Islamic education at Setiabudi Secondary School.

No	Items	ET1	ET2	ET3
1.	Teaching aids	/	/	/
2.	Time saving	/		
3.	Cost saving and attractive		/	
4.	Learning facility			/
5.	Easy to get resources	/		
6.	Ease the teaching		/	/
7.	Saving time and ensuring student participation	/		
8.	Make learning attractive		/	
9.	Provide various activities		/	/
10.	Always use technology	/		/
11.	Often	/	/	/
12.	Considering the students' availability and needs	/	/	/
13.	Exercise and evaluation tools		/	/

### Teaching aids

The perspectives of the informants on technology-based teaching are related to teaching aids. Informant 1 asserted that technology could ease the teacher to deliver the lesson and make the teaching and learning more effective. These facts can be seen in the answers below:

*“What I understand about this technology-based teaching is that what I want to say is the perspective of the use of technology, any teaching aids from the aspect of technology to make it easier for teachers to deliver lessons and the second is to multiply effectiveness in terms of students learning acceptance.” (ET 1)*

*“As a beginner for me, use technology as a tool which is an easy way also a teaching medium to learn. And I think 99% that a teacher needs to have technology, especially after we face a pandemic for 2 years*

*when we not allow to meet anyone else. We already use media, so we need to use this technology as a teaching aid.” (ET 2)*

*“The use of technology for teachers and students is following the latest tools such as smartphones in class, so I teach with use technology such as game applications were related to learning. Both technologies as the basis of learning which use applications.” (ET 3)*

In addition, informant 2 also agreed that technology is a tool in the process of teaching and learning. Likewise, all informants highlighted that technology as a teaching aid could provide and support various activities during teaching and learning, such as games.

### **Time saving**

According to informant 1, the teachers do need technology in their teaching to make their task easier and can save their time, either before or during their teaching. He also, asserted that technology can help teacher and student to have fast communication. These facts can be seen in the answers below:

*“I’m not saying we must use technology because we still have limitations to complete the device, but what I can say is that it really helps teachers and students in learning, before we used a long time to prepare assignments in school but now just use a short time, for example we can make fast communication and can share anywhere where it can help people. So, we take it as a facilitator.”(ET1).*

### **Cost saving and attractive**

*“The use of this technology is necessary nowadays, because we use social media a lot, so this is one of the adjectives for teenagers. Technology also makes it easier for me to save the data of my work, as well as we make assessments less use paper with the concept of the green world, we will reduce for using paper because in Setiabudi School all teachers will practice the concept of green world.” (ET2)*

For informant 2, using technology in teaching is mandatory, because the current situation requires teachers to adapt with modernization and ICT development. He also explained that technology could save the money for paper-based activities, such as regular exams. Technology also makes the teaching more attractive.

### **Learning facility**

*“For me it is necessary for Islamic education teachers to use technology as a tool to teach and how we saw before only Chalk and talk, where teachers explain and students listen, but if we really use this technology, the teachers and students can use smart phones in class*

*with effectively such as quizzes and others. So, I think students can access it in class as needed. for me the use of common applications plays an important role in facilitating learning sessions including Islamic Education subjects, then students will be able to summary easily and learning will be more effective.” (ET3)*

Informant 3 affirmed that Islamic education teacher must be familiar with technology as the tool in their teaching, because technology can provide various applications that can facilitate and support teaching and learning process.

### **Easy to get resources**

These facts can be seen in the answers below:

*“The first thing I can say that with technology we can easily get resources, which helps teachers prepare before teaching. Many applications are used by teachers to help the P&P in classroom become better and more effective. Now there are many simple and easy applications for students, which can easily evaluate students through these applications.” (ET1)*

Responding to the above question, informant 1 argued that technology helps teachers to save many soft files to avoid using paper-based resources. By using technology, informant 1 added, teacher can provide more effective teaching by using some application.

### **Ease the teaching**

According to informant 2 and 3, the role of technology in teaching and learning is obviously crucial due to its many advantages. Informant 2 affirmed that by using technology, teachers can show videos to support their teaching, they also can make the learning time shorter. Meanwhile, informant 3 argued that technology can make learning more actual and easier to understand through pictures and videos.

*“The use of technology can help teachers to make students understand quickly, for example by watching a video is better than without video, even just a view minutes take time for study because we use the concept theoretical and practical together, for example the pillars of ablution that easy to understand from watching video, and also students can repeat the video as they want make more understand.” (ET2)*

*“In my opinion, this technology actually helps teachers in terms of conveying knowledge, for example learning Hajj with this technology will make it easier for teachers to make presentations from the pictures or videos. So, the presentation makes it easier for the teacher to teach. Technology also makes it easier for students to repeat lessons, for example we can make a recording and share in the Google Classroom.” (ET3)*

### **Saving time and ensuring student participation**

These facts can be seen in the answers below:

*“One of the advantages by using technology is that save time and can make the teachers finish their tasks well. Also, during the teaching process we use applications in the classroom to ensure students more participation, for example students can watch more interesting videos. Finally, often before we used books, with technology we can now use assignments wherever and whenever where are we.” (ET1)*

Regarding the advantages of using technology in teaching Islamic education, informant 1 argued that technology can save his time in preparing the teaching materials and it also can ensure the participation of students in the class. He also added that the assessment through technology is more flexible.

### **Make learning attractive**

*“What is sophisticated is that technology can help the student's learning process itself such as keeping learning records, instructions will not be boring and also attract students' attention. Students can also access it wherever they want.” (ET2)*

For informant 2, the advantage of using technology in teaching Islamic education is that it makes learning attractive. It is because technology keeps students being motivated and excited throughout the lesson, and the students can access the materials easily.

### **Provide various activities**

*“Okay, the first advantage the use of technology is we can increase learning outcomes. So, we can make some activity such as online game for learning because they like to play games, and also avoid student feel bored and not interested. For me, sometimes students just being listeners and it's easy to get bored. So, with the technology we use games, quizzes and so on. The second is that technology also helps for memorization, that is when students enjoy with applications through technology were their memorization will increase, finally students easy to remember the important things.” (ET3)*

Likewise, informant 2 and informant 3 also highlighted that technology could avoid students from being bored, because it can keep students involved in the class. He also asserted that technology could provide much more learning materials and various learning activities, such as games and quiz apps. Hence, the learning outcomes could be better.

### **Always use technology**

These facts can be seen in the answers below:

*“It can be said that the occurrence in every class use technology, like in the Middle School before, the 4th and 5th grade students were allowed to bring their phones, some brought tabs and iPhones. So, they can bring their own gadgets in school. Shortly, use technology in class quite often actually.” (ET1)*

*“Okay, the frequency of ICT use, I can say that every class I will use that, as the good example we can use a slide show or PowerPoint. During using the technology, I prefer to use video presentation because activity in class we surprise for example we use the topic about hajj, slaughtering so with the videos just now the videos we took from before internet sources, from YouTube and so on.” (ET3)*

Answering the question about the frequency of using technology in their teaching, informant 1 and 3 stated that they always use technology during their teaching in Islamic Education classes. Informant 1 explained that the availability of students’ resources, such as smartphone or iPhone or tablet, make the use of technology easier. In addition, informant 3 asserted that the need for technology to support his teaching is obviously crucial, because he always uses at least power point slides in his teaching, and sometimes he needs videos to show the actual condition of the lesson, such as teaching Hajj.

### **Often**

*“I will use technology as much as possible in the classroom especially because it is fast and we as teachers need to prepare a lot of material that does not need to be written down, it just needs to be in PowerPoint form so it is easy to add to training by using that technology.” (ET2)*

Although the informant 2 does not always use technology in his teaching, he emphasized that he would use technology as much as possible, because according to him technology could ease his teaching. For instance, many materials can be delivered to the students in the simple way through power point.

Power point, quiz apps, video, Google classroom, smartphone, tablet.

*Examples in terms of applications that are used in terms of presentations such as PowerPoint, sharing questions and so on, then applications such as cahoots, quizzes are also sometimes available when classes are online, the apps we usually use are like videos so that each class in high school has its own people will be in their own Google Classroom, so whatever the teacher's assignment will be checked in Google Classroom.” (ET1)*

*“Now students for 4th and 5th grade, use mobile phones easily to access Google in the right way which how to use smart phones. We also provide training to students how to use Smartphones effectively and*

*lead them become truly good knowledgeable. Likewise in the classroom, teachers also use power point to give experience for students how to use technology well such as understanding for Hajj and umrah from that presentation.” (ET2)*

*“Thank you for the second question, the type as I like to use a device that is rather portable, for example I will use a tablet as a medium in class to make presentation, also using YouTube and Google classroom as an advantage application. In addition, for me to save materials such as PowerPoint, and videos. That is also one of the technologies that I think people say comfortable, because easy and convenient, shortly, we can also use game or quizzes.” (ET3)*

There are many kinds of technology used by the informants in their teaching, such as power point, quiz apps, video, Google Classroom, smartphone and tablet. The informants explained that different materials and learning strategies are different technology. Informant 1 emphasized the use of power point for sharing materials and exercise. For quiz and game apps, they are used to attract students to participate in learning, evaluation, or other activities, as stated by informant 1. Meanwhile, video is used to show the example of the lesson for the students to enable them watching the actual condition of any particular issue. Moreover, Google Classroom is used to share and save the materials that every one of the class members can access it.

### **Considering the students’ availability and needs**

These facts can be seen in the answers below:

*“In condition of the students were feeling comfort with using iPads, phones. However, we cannot put them on the same level, it has to be considered as well. So, for me I will make sure that all students in the class can do how to use technology well. I will use the kick class in my application and so on. But sometimes students need to write by using apps they feel difficult during studying Islamic studies which it becomes a limitation for students by using technology.” (ET1)*

*“First of all, I use technology as needed where each topic is different according for the need, sometimes some topics require video, PowerPoint or audio only.*

*ok, the second step is for students who bring their own cell phones in class and I will share a link directly to materials in the application such as quizzes where teachers can continue and to make assessments. Ok, the third step for students who can bring a phone, for example, students can directly access Google links, WhatsApp, Power Point and video.” (ET3)*

According to ET1 and ET3, the strategy of using technology in the classroom should consider the availability, such as smart phone or I-phone or tablet. The teacher needs to know whether the students are able to access the tools that we provide. In addition, informant 1 and 3 highlighted that the teacher should also consider the appropriateness of the technology with the students' needs and learning strategies.

*“Usually, teacher will prepare the materials before class and use technology as the tools. Okay, usually in teaching for my strategies, I prepare notes before class, then in class there is a group discussion session, we post back in the group which we didn't enough time to discuss. And we also make recorder for improvement.” (ET2)*

While informant 2 asserted that the teacher needs to prepare learning materials before class to enable him to decide which technology he will use and which issue the class will discuss. He also explained that technology could facilitate the students to access the materials outside the class. Technology also helps teachers to provide feedbacks of the lesson or evaluation to the students.

### **Effective teaching**

These facts can be seen in the answers below:

*“The first when I use technology can save my time, the second is related to effectiveness is more interesting. So, another achievement of ours is one of the things I used for the test, how to answer the test using paper and so on.” (ET1)*

Answering the question above, informant 1 affirmed that technology can make the teaching and learning more effective, because it could save time and cost as well as makes the learning attractive.

### **Exercise and evaluation tools**

*“There are many things we can do to repeat the material we have use as an exercise and to reduce also teachers' work. Also, the benefit of technology can reduce printing too many papers and can saving budget. Student also enhance to learn to use the role of technology such as mobile phones or tabs.” (ET2)*

While informant 2 argued that technology can facilitate the students to review or revisit the lesson after class and could be a tool for evaluation. Likewise, informant 1 and informant 2 also highlighted that technology could save money, for instance avoiding using papers for printing the materials.

*“Okay, first of all to make it easier for me which I can save data, for example when I go anywhere, no need to carry a book, I can access it anywhere, second. I can easily grade students by dividing marks from Google Classroom, so wherever and whenever I can grade my students base on my own time.” (ET2)*

For informant 3, he affirmed that technology obviously helps and eases his teaching in many ways, such as it could provide learning materials for him without accessing printed book or materials. Likewise, informant 2 also highlighted that technology could be a tool for evaluation where the student can do the exercise provided by teacher outside the class. He also added that technology facilitates the teacher to provide various learning activities.

## **SUMMARY**

This chapter presents the finding of the study from the collected data. The data were collected through semi structured interview and analyzed using thematic analysis. The findings revealed two major themes based on two research question, namely the understanding of technology-based teaching and the use of technology in teaching Islamic education.

The first theme consists of four sub-themes; first, perspectives of the respondents about technology-based teaching. The informants agreed that technology based-teaching is considered as teaching aids. Second, the teachers obviously need technology in their teaching because technology comes with many advantages for their teaching, such as it could save money, time, and also ease the teaching. Third, the teachers confirmed that technology helps them in their teaching because it can provide unprinted resources and facilitate their teaching. Fourth, there are different advantages of using technology, for instance, making learning attractive and ensuring students' participation.

The second theme also consists of four sub-themes; first, the frequency of teachers in using technology is divided into two categories. Two teachers from the participants revealed that they always use technology while the other one confirmed that he uses it as much as possible. Second, there are some kinds of technology used by teachers in teaching Islamic education, such as hardware, including smart phone and PC, and software, including power point and some applications. Third, the teaching strategy using technology practiced by teachers emphasizes on the consideration toward the availability of devices for students. Fourth, the teachers confirmed that technology obviously eases their teaching, because it makes teaching more effective and provides some apps for learning activities and evaluation.

## **DISCUSSION**

This study aimed to explore the awareness of Islamic education teacher on the use of technology in teaching Islamic education. The findings revealed two main themes, i.e., the understanding of the teachers about technology-based teaching and the use of technology in teaching Islamic education.

### **TEACHERS' UNDERSTANDING ABOUT TECHNOLOGY-BASED TEACHING**

The informant defined technology-based teaching as the use of technology in teaching and learning to make the learning process easier and more effective. Hence, the three informants agreed that technology is the tools that help teachers in their teaching. Shortly, technology-based teaching is considered as teaching aids. This definition given by informant is supported by Albirini (2006) who asserted that technology provide an active, easily accessible and inclusive teaching and learning environment. It also serves as learning tools to practice knowledge and skills (Tondeur *et al.*, 2007)



In addition, Nakayima (2011) reported that the use of ICT in teaching and learning process could improve students' achievement.

Moreover, the informants highlighted that teacher of Islamic Education nowadays need to use technology in their teaching, due to its benefit. For instance, it could save money and time. Informant 1 explained that by using technology he does not need to have the printed book as materials to support his teaching. This proves that he can save money. In addition, it also can help him to reach the online or soft files from Internet. Kumar (2018) also highlighted that technology could decrease paper use and photocopying cost while also promoting the concept of green revolution.

Furthermore, informant 1 explained that technology provides him easy resources where he can access it whenever he wants. Meanwhile, informant 2 and 3 highlighted that technology helps them ease their teaching through utilizing it as learning tools. Hence, the informants asserted that technology comes along with various benefits for them. In addition, they also explained that there are many advantages of technology for students such as making learning attractive, keeping them in touch with the lessons, and providing various activities and games. Kumar (2018) also reported that using technology in teaching makes students more excited to learn and make learning more accessible. Mama and Hennessy (2013) highlighted the current condition of how exactly teenagers behave and live with technology arguing that teaching and learning should adopt technology-based teaching as the tools to increase students' learning and interactivity.

### **USE OF TECHNOLOGY IN TEACHING ISLAMIC EDUCATION**

The informants affirmed that they always use technology in their teaching to support and facilitate students in understanding the lesson. Informant 2 agreed that even though he does not use technology always, he utilizes them as much as possible. Ertmer's (1999, 2005) also indicated that the teachers need to have a strong belief on the important role of technology in teaching and learning to support and encourage them in practicing technology-based teaching. She, moreover, highlighted its benefits, such as motivating, reinforcing, and practicing subject skills and enriching the curriculum through integrating the educational tools and teaching contents.

There are various kinds of technology used by the teachers to teach Islamic education in Setiabudi secondary school, such as power point, computer, smartphone, apps, and tablet. Murati (2017) explained that using computer as a teaching tool in the classroom can encourage teaching flexibility and provide various contents. Siew Foen *et al.* (2017) reported that the use of smartphone or cellphone in the class facilitates the students to access many features in their phones, playing or recording videos, using calculators, and accessing various apps. Pallikkutam (2018) reported that power point presentation helps students have better understanding and facilitate them to take notes better from the displayed information.

The strategies of using technology in teaching and learning, according to the informants, should consider the availability of devices for the students to access. Hamzah *et al.* (2009) identified that there are some barriers of using technology for Islamic Education teachers and students, such as lack of computers and available resources. The teachers also need to consider the appropriateness of the particular technology to the subject or teaching method. Hence, the informant 2 explained that the teachers need to prepare the teaching materials and decide the learning tools to be used in teaching.

In line with the role of technology to ease their teaching, the informants indicated that they feel so happy and helpful when they use technology in their teaching. Informant 1 affirmed that his teaching is more attractive when he applies technology-based teaching. Moreover, informant 2 explained that technology facilitates him to evaluate students through quiz or exercise. While informant 3 asserted that he can access teaching resources easily from internet or soft files from phone or computer. In line with the benefit of using technology in teaching Islamic Education mentioned earlier, Nakayima (2011) also reported that using technology in teaching and learning becomes a serious matter as it was proven that the usage of ICT could improve students' achievement.

## **CONCLUSION**

Having discussed the findings of the study base on the analysis of the three interviews, the following conclusions could be made: (1) Technology-based teaching refers to the use of technology as teaching aids to help teachers deliver the lessons and to ease and facilitate the students for learning. (2) Technology-based teaching helps Islamic Education teachers save money and time, get resources easily, and provide various activities. (3) Islamic Education teachers always utilize technology in their teaching base on the appropriateness of the technology with the learning materials or teaching method. (4) There are several kinds of technology used by Islamic education teachers, for instance, computer, cellphone, tablet, power point, and various apps for games or quizzes. (5) The awareness of Islamic Education teachers toward technology-based teaching is considered to be proper as it is proven by their perspectives on the technology-based teaching and their practice in teaching Islamic education.

## **RECOMMENDATION**

Based on the findings and discussions of the present study, the researcher would recommend the followings: (1) the teachers of Islamic education need to have a strong belief on the use of technology in their teaching to encourage them practicing the technology-based teaching. (2) Before using technology in teaching, teachers should consider the availability of devices for students to access the resources as well as to consider the appropriateness of the particular technology with the subject or teaching method. (3) Islamic schools or educational institutions must support the current needs toward technology-based teaching in teaching and learning process through providing and fulfilling the facilities related to technology-based teaching, such as hardware and software as well as Internet network.

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