CHAPTER ONE

INTRODUCTION

1.1 Introduction

This chapter introduces the context of the research to facilitate its understanding. It presents the background, problem statement, research hypotheses, research questions, research objectives, significance, scope and limitation, theoretical and conceptual framework, and operational definitions.

1.2 Background

Islamic Religious Education or *Pendidikan Agama Islam* (PAI) has a critical role in the development of children's cognitive (knowledge), psychomotor, and affective (attitude) competencies. In Indonesia, the instruction of PAI in schools is legitimized by Act No. 20/2003 on the National Education System. Among the most important duties of PAI educators is to develop students into individuals who believe and devote themselves to God and possess good character. Nonetheless, this task is not the sole responsibility of PAI teachers; it is realized through cooperation with teachers of other subjects.

PAI is an important subject that must be taught to Muslim students from the elementary to the university level. Act No. 20/2003 specifies that every student in each education unit has the right to receive religious education in accordance with their religion and is taught by educators of the same faith. Based on this Act, every education unit is required to teach PAI to its students.

The objective of all religious education in Indonesia, including PAI, is to develop students' abilities to understand, appreciate, and practice religious values, parallel to their mastery in the sciences, technology, and art (PP No.55, 2007). This objective covers the cognitive, affective, and psychomotor aspects. Therefore, the purpose of PAI is not only to form cognitively capable students but also to develop their attitudes and skills through the inculcation and practice of religious values.

The instruction of PAI is still largely traditional, outdated, and conservative. The teacher tends to use the lecture method, writing on the blackboard, while the students write, listen, and memorize the materials given by the teacher. This learning approach is monotonous and tedious for students, and as such the learning process is not effective (Sumarni, 2013). Therefore, PAI teachers must be more innovative and creative in developing teaching-learning methods, media, and approaches.

The research by Sumarni (2013) evinces that the students' achievement of affective competency in PAI is still poor, the affective achievement of value inculcation in interfaith relations within the context of society, nation, and state is still low. However, cognitive achievement is satisfactory. The author suggested that PAI teachers should be more creative and innovative in accomplishing the objectives of PAI learning. Teachers must move away from conventional, monotonous, and traditional ways of teaching.

According to a PAI teacher at the Integrated Islamic Junior Secondary School (SMPIT) Al-Azhar 37, the average student learning outcome score for the subject was 77.8. This shows that the students have met the minimum cognitive competency level. However, the learning outcome should not be limited to only the cognitive aspect; it should also include psychomotor and affective competencies.

Otherwise, the students would only be knowledgeable in the subject, but they may not possess good character or behavior. This would be the outcome of a learning orientation that solely focuses on memorization, knowledge, and intelligence. This does not mean, however, that cognitive competence is unimportant. Rather, the PAI learning process should not stop at cognitive achievement, but it must also arrive at the complete achievement of multiple competencies so as to form intelligent, faithful, pious, well-behaved, and noble individuals.

The Centre for Islamic and Community Studies (PPIM) of UIN Syarif Hidayatullah found that religious attitudes related to religious intolerance are alarming. It found that 17.3% of the surveyed religious teachers were intolerant towards other religions, while 34.1% were intolerant towards their coreligionists (PPIM UIN Jakarta, 2018). Other findings explain that education in Indonesia is politically and practically inconsistent in cultivating tolerance and multicultural education (Raihani, 2018). This study may indicate that PAI has not successfully improved the affective and psychomotor competencies of students.

As the above studies suggest, the learning and teaching of PAI is still facing various issues. Its instruction has not succeeded in accomplishing its objectives, nor has it been able to improve the poor practices of Islamic values, religious toleration, piety, and *akhlak*. Innovation, creativity, and hard work from PAI teachers are therefore highly needed, especially in the aspects of instruction methods, the use of media or information and communication technology, and learning strategies and approaches. PAI teachers are required to be able to develop instruction methods that are not monotonous, rigid, and tedious through the application of methods, strategies, approaches, media, and new information and communication technologies in the learning process.

Information and communication technology can be used as both a medium and a resource of instruction inside and outside the classroom and school. It can contribute to the effectiveness of learning (Haleem et al., 2022). There are various types of media, one of which is interactive multimedia. It is a combination of images, texts, sounds, videos, and animations, operated using laptops, computers, smartphones, tablets, or other such devices, to facilitate learning using information and communication technology (Abdulrahaman *et al.*, 2020). The use of interactive multimedia in learning is unavoidable considering the rapid development of science and technology. Many devices are used in supporting interactive multimedia, as for the concern in this study is the use of iPad devices.

Several schools in Indonesia have implemented interactive multimedia learning, one of which is SMPIA Al-Azhar. Based on data obtained from its website, Al-Azhar has 44 branches of SMP in Indonesia. Not all al-Azhar junior high schools implement interactive multimedia in learning. In this study, two al-Azhar schools, namely SMP al-Azhar 1 and SMP al-Azhar 37, were selected. The first consideration was that the school applies iPad device as interactive multimedia in learning process, while the second consideration was time and cost savings, as they are nearest to the researcher. The schools implement interactive multimedia, and so they require students to own a device when they are admitted. This implementation is an innovative breakthrough that is consistent with the needs and trends of people in the current era (Ishak, 2022). The teachers use or implement interactive multimedia device in day-to-day instruction activities. Interactive multimedia is online, programmed, and can retrieve information from the internet. The teachers use it as a medium and a resource of face-to-face, in-class PAI instruction, and students can use it anytime and anywhere outside of class hours.

The implementation of interactive multimedia in instruction is needed and unavoidable due to advancements in technology, computer engineering, and software (Munir, 2012; Dariyono and Mukhidin, 2021). Schools must adjust to this development by innovating the teaching and learning process, such as using interactive multimedia-based applications. In line with advancements in information and communication technology, the media used to deliver messages or information in the teaching-learning process have also changed. Before laptops, the internet, and projectors, learning media were still traditional and manual. They were either drawn or written by hand before presented using an overhead projector. Now, teachers, lecturers, and educators, as well as other presenters, use laptops, internet, and projectors as the media. With these devices, such media as images, sounds, animations, texts, graphics, and online sources can be presented during the teaching and learning process, both within and without the classroom (Dariyono and Mukhidin, 2021).

Media can theoretically increase the effectiveness and quality of learning in science and Islamic subjects (Heinich *et al.*, 2012; Winarto, Syahid and Saguni, 2020). Technology plays an important and unique role in the education of students. Tailored and specially designed technology and media can contribute enormously to effective instruction and can help students achieve their potential regardless of their innate abilities (Bertram *et al.*, 2017). The functions of media in instruction are to make the learning process more interesting and more active and to improve student attitude (Winarto, Syahid and Saguni, 2020).

The scholars' views above confirm that the use of interactive multimedia can affect students' learning, activeness, competencies, and attitudes. This contrasts with the issues mentioned previously. The relationship between PAI

learning outcomes, students' activeness, and media theory is an interesting subject of research. It is imperative to study the relationships between students' perceptions and participation in the learning process, the use of interactive multimedia, and students' competencies in PAI learning (Munir, 2012; Winarto, Syahid and Saguni, 2020; Nofrianti and Arifmiboy, 2021). Students' perceptions may also be assigned as the variable that mediates the effect of interactive multimedia on students' activeness or participation.

According to a PAI teacher of SMP IT Al-Azhar 37 Pekanbaru, there are still persisting issues about the use of multimedia as an instruction and learning tool in school:

a. Some students are unfamiliar with interactive-multimedia-based teaching and learning process.
b. Some students feel bored with interactive-multimedia-based teaching and learning process.
c. Some teachers are inexpert in operating interactive multimedia devices.
d. Some teachers are unable to manage the classroom well.
e. Some students are unable to effectively respond to multimedia learning.
f. Some students are less active in individual and group multimedia learning.

Based on the phenomena presented in previous studies and the above gaps, the researcher intends to examine the use of interactive multimedia device in PAI, the perception of students towards it, and its relationship with students' participation and competencies.

1.3 Problem Statement

The laws and regulations of the Indonesian government state that PAI has the goal of forming students with good religious knowledge, skills, and attitudes. This means that the objectives of PAI include the three aspects of cognitive, affective, and psychomotor. However, past studies suggest that PAI is still cognitively oriented, so that many students do not have a good religious attitude.

There are several factors for the poor quality of PAI. These include teachers; learning and instruction approaches, methods, strategies and techniques; parents, facilities; and interactive multimedia (Sumarni, 2013; Mahmood, 2019; Amin and Ahmed, 2021). PAI instruction methods are still traditional and monotonous, which lead to ineffective learning process. Therefore, the use of modified teaching methods and strategies that suit students' learning styles can encourage effective learning (Schilling, 2016; Alenezi, 2020).

In addition, it is suspected that the low quality of PAI is caused by the use of monotonous and traditional media. The media used are only limited to blackboards and textbooks. Students rarely interact with other audio, visual, and audiovisual sources, and as such their participation and activeness are poor. To resolve this issue, interactive multimedia, which combines visual, audio, and audiovisual media, can be used a as a learning resource. The use of interactive multimedia contributes to the effectiveness of learning and can help students reach their highest potential according to their talents(Heinich *et al.*, 2012; Chmiliar, 2017).

Student participation is also one of the factors that influence the success of PAI. Education will be effective if students participate actively in the learning process. Students can benefit more from religious learning if they are involved in

discussion, observation, asking and answering questions, solving problems, and other activities that involve high-level thinking, acting, and behaving. Learning will be effective if students actively interact with sources or learning materials and practice them in their lives by providing feedback on learning (Heinich et al., 2012). In addition, student perception is also one of the factors that influence PAI. Perception is an important determinant of learning success or failure (Dornyei, 2001; Bowden, Tickle and Naumann, 2021).

Therefore, it is believed that the failure of PAI is caused by the influence of media and the perception of students towards using interactive multimedia. Furthermore, student participation or activeness in an interactive-multimedia-based learning process is mediated by the students' perception towards learning using interactive multimedia. Therefore, this study seeks to determine the effect of using interactive multimedia in PAI on student competence and participation, with student perception as a mediating variable.

1.4 Research Hypotheses

1. Student perception significantly differs by grade level, gender, and school origin.
2. Using interactive multimedia significantly influences student competencies.
3. a. Interactive multimedia significantly influences student perception.
   b. Interactive multimedia significantly influences student participation.
   c. Student perception significantly influences student participation.
   d. Student perception mediates the relationship between interactive multimedia and student participation.

1.5 Research Questions

1. a. How do students perceive using interactive multimedia device to learn PAI?

   b. Does student perception towards using interactive multimedia significantly differ by grade level, gender, and school origin?

2. Does the use of interactive multimedia influence student competencies?

3. a. Does interactive multimedia device influence student perception?

   b. Does interactive multimedia device influence student participation?

   c. Does student perception towards interactive multimedia influence student participation?

   d. Does student perception mediate the relationship between interactive multimedia and student participation?

1.6 Research Objectives

The general objective of this study is to investigate the students' perception of students using interactive multimedia. The specific objectives are:

1. a. To investigate the perception of students towards using interactive multimedia device.

   b. To investigate the differences in the perception of students towards using interactive multimedia by grade, gender, and school origin.

2 To investigate the effect of using interactive multimedia on student competencies.

3. a. To investigate the effect of interactive multimedia on student perception.

   b. To investigate the effect of interactive multimedia on student participation.

   c. To investigate the effect of student perception towards interactive multimedia on student participation.

d. To investigate whether student perception mediates the relationship between interactive multimedia and student participation.

1.7 Significance of the Study

First, this study enables better understanding of students' perception towards the use of interactive multimedia in learning PAI and whether it can improve their competencies in PAI. Based on past studies, the instruction of PAI is still monotonous, traditional, and cognitively oriented. Therefore, this study can serve as a reference for teachers in using interactive multimedia to make PAI instruction more creative, innovative, and oriented towards all three learning domains.

Second, it offers in-depth insights by examining the moderation of perception on the relationship between the use of interactive multimedia and student competencies. Third, In Indonesia, very few schools apply interactive multimedia in teaching. Therefore, the results of this study may be useful for teachers, principals, and heads of education offices to consider the use of interactive multimedia in learning, especially for PAI.

1.8 Scope and Limitations of the Study

The scope of this research is to investigate the perception of students towards the use of interactive multimedia device; the effect of using interactive multimedia on student competencies, perception, and participation; and the effect of interactive multimedia use on student participation, mediated by perception. The scope of this research is also limited to schools that use interactive multimedia device in its learning activities.

This study has several limitations. First, it is limited to two schools, namely SMPIT 37 Al-Azhar in Pekanbaru and SMPIT 1 Al-Azhar in Jakarta. The school has only recently implemented the interactive multimedia device with iPad brand for learning. Therefore, it may not be appropriate to generalize the findings and conclusions to other schools. Second, this study was only conducted on students. Teachers, principals, and administrative staff were not included as the research subjects. Third, this study was limited in terms of time and resources. Therefore, data collection was adjusted to the circumstances in the research location, so as not to disturb the students' classes and the learning process.

1.9 Theoretical and Conceptual Framework

As mentioned earlier, the main objective of this study is to understand the use of interactive multimedia in PAI. Specifically, it intends to:

a. Investigate the perception of students towards using interactive multimedia to learn PAI;
b. Investigate the effect of using interactive multimedia on student competencies; and
c. Investigate the mediating role of student perception on the relationship between interactive multimedia and student participation.

There are numerous devices that can support multimedia applications and can be used by teachers for online and offline instructions. Computers, laptops, tablets, smartphones, and other such devices can be used both online and offline. The interactive multimedia used by the sample school is installed on the iPad and connected to the internet. The iPad is a tablet designed and produced by Apple Inc. Every student at SMP IT Al-Azhar 37 is required to own an interactive multimedia

device as a medium and a resource of the teaching-learning process in class upon their admittance to the school.

A number of articles have examined the effects of learning with interactive multimedia and other factors on student competencies and participation or engagement. Before these are discussed, it is first necessary to understand the concept of interactive multimedia. Multimedia is the integration of two or more media. Multimedia learning means merging two or more media in teaching and learning activities. According to experts, multimedia is the use of two types of media, namely words and pictures, and so the phrase "multimedia learning" means learning using words and pictures. Meanwhile, the phrase "multimedia instruction", refers to the presentation of teaching materials using both words and pictures (Mayer, 2021).

Some scholars disagree with the above definition, saying that it is the combination of five types of media, namely text, art, sound, animation and video, presented electronically using a computer or other information and communication technology devices (Vaughan, 2011; Abdulrahaman *et al.*, 2020). The incorporation of several elements from the five media types is a characteristic of multimedia which makes learning easier to understand and communication more organized and clearer (Gunawardhana and Palaniappan, 2016).

In general, multimedia is divided into linear and non-linear. Linear multimedia presents material sequentially so that users have less interaction with the media that they operate. Non-linear multimedia, on the other hand, allows users to fully control the contents (Dwi Surjono, 2017). Vaughan (2011) stated that multimedia is interactive when users are allowed to control what and when the contents and elements are shown using the navigation buttons. The term interactive

multimedia is more often used compared to non-linear multimedia. Thus, interactive multimedia is the use of several types of media that allow users to control materials and elements using the navigation buttons. This study focuses on interactive multimedia used on the iPad device because it has been programmed and set as a medium and source of learning of the sample school.

This study is based on the multimedia cognitive theory and acceptance model theory, namely the Technology Acceptance Model (TAM) and Unified Theory of Acceptance and Use of Technology (UTAUT). Mayer (2021) explained that the use of multimedia in the learning process aims to improve understanding, increase motivation, and create more meaningful learning. By learning using multimedia, students can understand the material in depth and are able to mentally organize with cognitive structures and connect new knowledge with the knowledge that they already have. Meaningful learning describes students who are able to apply the knowledge they already have in real, new, and different situations and conditions (Mayer, 2021). Thus, the use of multimedia will involve interactions between students' cognitive processes and multimedia during the process. Mayer (2021) stated that the use of interactive multimedia will affect student participation. Students become more deeply involved with the learning process; they can understand the materials better and store them longer in their memory. He also stated that the use of pedagogical agents can help students to focus on learning. In this case, multimedia should be able to assist someone to interact with multimedia (computers) and between humans. This means that the use of interactive multimedia is more recommended than linear multimedia. The quality of interactive multimedia is important and affects student learning (Mayer, 2021). Additionally, multimedia quality can also be seen from the aspects of content

organization, navigation, and orientation (Kennedy, Petrovic and Keppell, 1998; Teoh and Neo, 2007).

This study cannot be separated from the technology acceptance model (TAM) developed by Davis and the unified theory of acceptance and use of technology (UTAUT) theory developed by Venkatesh. These theories are used to examine the acceptance of users of a technology in various dimensions, one of which is learning. In the use of interactive multimedia, users consider the benefits, usability (perceived usefulness), and ease of use (perceived ease of use) of the technology. The high usage of an information system indicates its usefulness and ease of use. The user's positive response shows his acceptance of the use of the technology. In the pedagogical context, this means that students will be encouraged to use a technology for learning if they perceive it to be useful and easy (Fred and Davis, 1989; Venkatesh and Smith, 2003). Furthermore, Davis and Venkatesh (2003) explained perceived usefulness and ease of use can predict and explain the reasons why users use technology (interactive multimedia), and intention to use becomes a mediating factor for student behavior (behavioral intention to use). Based on above discussion, the theoretical concept of this study can be illustrated as follows (Figure 1.1).

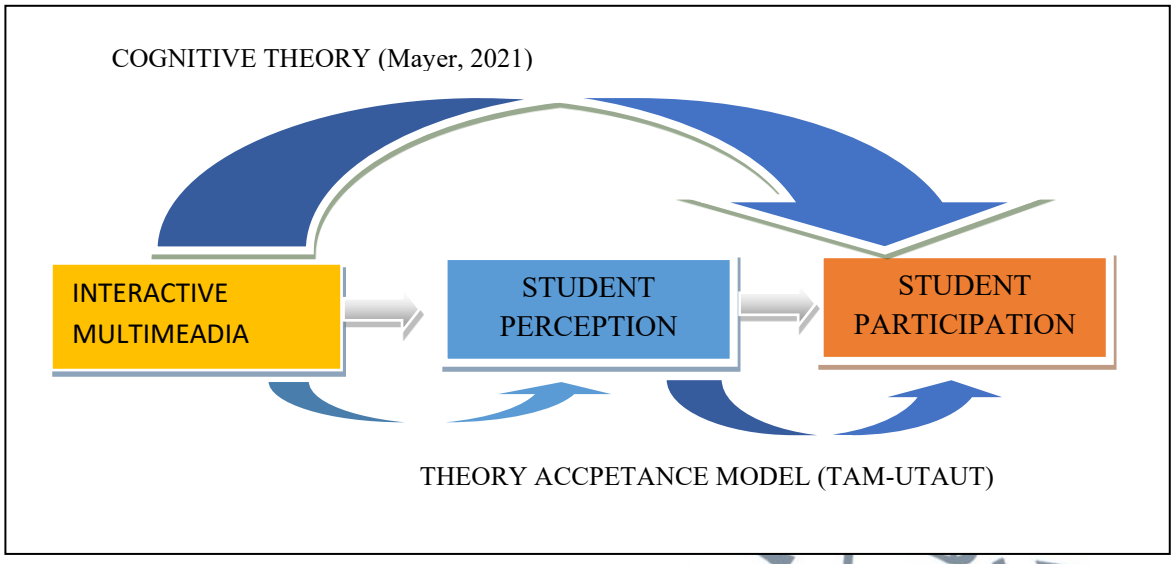

Figure. 1.1. Conceptual Framework

1.10 Operational Definitions

1. Interactive multimedia: The use of iPad in teaching and learning to display texts, sounds, images, animations, audios, and videos that the user (student) can control anytime and anywhere.
2. Perception: The feeling or opinion of an individual about using interactive multimedia in class.
3. Participation: Part of the overall student engagement process that can be divided into five categories: preparation, contribution to discussion, group skills, communication skills, and attendance
4. Competencies: The expected learning outcomes of PAI learning, consisting of spiritual attitude, social attitudes, knowledge, and skill.

1.11 Conclusion

This chapter has discussed the background of this research. It has covered the problem statement, hypotheses, research questions, research objectives,

research significance, scope and limitations, the theoretical and conceptual framework, and the definition of each key variable. The next chapter reviews past studies relating to the use of interactive multimedia in PAI learning.