Analysis Of Technological, Technological, Pedagogical, And Content Knowledge (TPACK) of Islamic Religious Education Teachers of MTS On Hadas And Najis Materials

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ABSTRACT

This study aims to analyze the Technological Pedagogical Content Knowledge (TPACK) skills of MTs Islamic Religious Education (PAI) Teachers on Hadas and Najis Material. The method used in this research is descriptive research. In descriptive analysis, researchers do not treat the object of study. The sampling technique used was purposive sampling with 6 Madrasah Tsanawiyah Schools (MTs) in West Lombok Regency, NTB. Data is collected via the TPACK filling tool. Data analysis by coding is based on seven categories in the TPACK framework (CK, PK, TK, PCK, TPK, TCK, TPACK). Based on the results of data analysis, the ability of Madrasah Tsanawiyah (MTs) teachers in West Lombok Regency, West Nusa Tenggara, on hadas and najis material shows (a) there is no difference between groups A and B in the level of TPACK ability. There is a difference in the length of a teacher's teaching experience. The planning and implementation capabilities of TPACK MTs teachers are limited to focus and its tools along with whiteboards and markers, which are implemented in the process of teaching and learning activities using the presentation method in a class by each group of students.
Keywords: TPACK, Teacher, Islamic Religious Education, Hadas and Najis Materials

A. INTRODUCTION

The teacher as an educator is the person who has the most contact and interaction with students compared to other school employees. Teachers are responsible for planning and implementing learning, evaluating learning outcomes, providing counseling and training, conducting research and inquiry, and opening communication with the community (Sagala, 2009). Teachers must also convey material well in teaching and learning activities because learning is a process in which a person develops new knowledge, skills, and behavior through interaction with various information and the environment. Even today, teachers must be up to date with what it takes to enhance the teaching and learning of AI for K-12 with the Pedagogical Content Technology Knowledge (TPACK) framework (Tallvid et al., 2012). Therefore, teachers must be able to convey the information they know correctly and directly, namely the correct content, through practical pedagogical activities.

The development of digital technology in education has reached the stage where the school curriculum integrates technology into learning activities. Currently, teachers and students are expected to be able to integrate it to improve the ability and quality of learning and develop the 21st century (Papanikolaou et al., 2014). This skill is called TPACK. Skills (Aunt & Khan, 2017) defined teaching content as professional and pedagogical knowledge content (PCK). Content and pedagogical information identify specific information intended for use in the classroom. PCK is a combination of content and pedagogy to understand how particular topics and problems or questions are structured, presented, and adapted to the interests and abilities of different students and explained in the form of lessons (Dong et al., 2020). Content and pedagogical knowledge is the most specific category to separate professional understanding of content from educators (Özgür, 2020; Tokmak, 2015).

With the passage of time and the increasing needs of students, teachers must have more than just PCK knowledge. However, teachers must be able to teach subjects using technology other than PCK (Jones et al., 2015; Su et al., 2017). The current teaching and learning process reflects the increasing integration of computers and technology applications into the curriculum. The idea of combining subject, teaching, or learning knowledge and technology has been around since the need for students to use and learn through technology has grown (Bas & Senturk, 2018; KIRIKÇILAR & YILDIZ, 2019). In this regard, knowledge of technology, pedagogy, and content has become integral to teacher education programs to prepare future teachers to teach using technology in the classroom.

Building on Shulman's ideas about PCK, Mishra, and Koehler (2006) add technology to PCK and describe TPCK as the relationship between technology, pedagogy, and content.

TPCK is the foundation of promising technology education and requires an understanding of how technology presents concepts; pedagogical techniques that use technology constructively to convey content; Knowledge of what makes learning concepts difficult or easy, and how technology can help with some of the problems students face; students' prior knowledge and epistemological theory, and knowledge of how technology can be used to build on existing knowledge and develop new epistemologies or reinforce old ones (Kocoglu, 2009).

Therefore, teachers must be able to integrate technology into their learning. What is needed is an approach that treats teaching as an interaction between what teachers know and how they apply that knowledge to interesting situations or contexts in their classrooms (Othman & Maat, 2020). There is no one best way to integrate technology into the curriculum. Instead, integration efforts must be creatively designed or structured for specific topics and main ideas in certain classes (Koehler and Mishra, 2009).

Hadas and Najisis are one of the subject matter of Islamic religious education, which contains several concepts that need to be fully understood by students. The presentation of this material requires the teacher's ability to organize the subject matter as a basis for understanding and practicing it in everyday life. Therefore, a form of learning is needed to describe the difference between *Hadas* and *Najis* and how to implement it in everyday life.

The teacher must understand the knowledge and different learning styles to complete this new task. Teachers must also understand student development, various academic concepts and master learning materials and alternative assessments to measure student learning outcomes. Therefore, teachers must be able to use the topic of language and cultural differences, learning styles, skills, and intelligence as a basis for implementing their chosen teaching strategies (Abidin, 2009).

Based on the conditions above, learning must take place based on what students know and can do, as well as how students think and learn, to adapt the learning process to the required achievements according to students' individual needs. From this fact, it is clear that a teacher must have superior qualities to fulfill his new role in the educational process. The creation of superior-quality teachers must occur both when the teacher is involved in the teacher education process and when the teacher has fulfilled his role as an educator (Abidin, 2009). Therefore, the author raises the theme of problems regarding educational technology and content knowledge, where the author will analyze MTs teachers in Islamic Religious Education Subjects in West Lombok Narmada Regency.

B. METHODS

The research conducted was descriptive, where the researcher did not treat the research object. Researchers only take data without any changes. From 15 junior high schools in West Lombok Regency, NTB, the researchers took a sample of 7, each represented by 1 PAI who taught in class VIII MTs. The number of instances the researcher takes depends on the teacher's willingness to fill out the TPACK instrument adopted from the Srisawasdi journal and fill in the respondent's biodata. In addition, researchers also conducted interviews with respondents before giving the instrument. After the data was obtained, the researcher grouped the data according to the concepts raised by the respondents for each respondent. After that, the data were grouped based on the length of each respondent's teaching experience. Then categorize, it into 7 TPACK components, each grouped into several categories.

C. RESULTS AND DISCUSSION

In this study, researchers took as many as six respondents from different schools. The respondents were divided into two groups based on the length of their experience teaching at school. The concepts adopted are the same concepts chosen by the respondents. The following are the findings obtained in the field and their discussion.

1. Group A TPACK Ability Analysis (11 years or more of Teaching Experience)

a. FA Respondent

In the TPACK instrument, respondents identified the meaning and divided kinds of uncleanness into simple contents into more imaginable forms of representation, namely the importance of hadas and unclean, types of dirty and messy, and their application in daily life (CK-Cn). Respondents used the group discussion learning method in class (PK-Pn). In this method, respondents use the LCD to support the class discussion process by students by displaying PowerPoint made by students (TK-Pn). During the group discussion, students were guided by the teacher to be able to explain the material contained in the content themselves by using their PowerPoint presentations (TPK-Pn).

Respondents used group discussions on various types of hadas and impure so that students could explore their knowledge and discover the different concepts of the various types of Hadas and Najisthemselves (PCK-Pn). Apart from that, the respondents also facilitated the students by using the shows that the students had made to help realize the difficulties that were found by the students (TCK-Pn). Based on the TPACK components described, the TPACK ability of FA respondents is included in the Perception Level-Pn category because respondents

can identify content difficulties and teaching methods that are appropriate to technology. Respondents, however, could not explain how to use technology to modify content.

b. Response SN

Of the four selected concepts, namely the Definition of Hadas and Unclean, types of Hadas and unclean, how to purify hadas and cloudy, and examples of hadas and unclean. Based on the data analysis that the respondents in the TPACK instrument filled in, the respondents divided the material briefly and simply into a more imagined form of representation. Regarding various types of hadas and najis, the respondents divided them into several simple materials. On the material understanding of hadas and najis, the respondents presented from several experts, both fiqh experts and scholars (CK-Cn).

Respondents used the presentation learning method in class (PK-Pn). In this method, respondents use focus, whiteboards, markers, and laptops to support the presentation process by students by displaying PowerPoint made by students (TK-Pn). During the presentation, students are guided by the teacher on complex material so that they can explain the material in their PowerPoint (TPK-Pn) themselves. Respondents used the presentation learning method to define and describe the various Hadas and Najis(PCK-Pn) types. Apart from that, the respondents also facilitated the students by using the shows that the students had made to help materialize the examples of impure and impure students (TCK-Pn). Based on the TPACK components described, the TPACK ability of AG respondents is included in the Perception Level-Pn category because respondents can identify content difficulties and identify teaching methods that are appropriate to technology. However, respondents cannot explain how to use technology that can describe the material.

c. Respondent SM

Respondent SM presented material briefly, starting from the understanding according to experts and presenting various kinds of hadas and unclean, including examples of Hadas and Najis(CK-Cn). Meanwhile, for several types of hadas and najis, the respondents did not identify simple materials (CK-Pn). Respondents used discussion, information, introduction, and assignment learning methods in class (PK-Pn). In this method, respondents use focus, whiteboards, markers, laptops, and CD players to support the discussion process by students by displaying PowerPoint made by students and several shows in the form of videos played using a CD player to support students' conceptualization of content (TK-Cn). During the discussion, students are guided by the teacher on challenging material.

Respondents used the discussion learning method to convey Hadas and Najis(PCK-Pn) examples. Apart from that, respondents also facilitated students by using shows that students

had made and videos to help realize the difficulties found by students (TCK-Pn). Based on the TPACK components described, the SM respondents' TPACK abilities are included in the Perception Level-Pn category because respondents can identify content difficulties and can identify teaching methods that are appropriate to technology. Respondents, however, could not explain how to use technology to modify content.

2. Group B TPACK Ability Analysis (6-10 Years Teaching Experience)

a. Respondent AH

In the TPACK instrument, respondents divided the material on the meaning of *Hadas* and *Najis* into a simple presentation of the material into a state of representation that is easier to understand in concrete form (CK-Cn). Meanwhile, the material for various kinds of hadas and najis is not divided into a simple form (CK-Pn). Respondents used group discussion learning methods in a class, observing pictures and the environment (PK-Pn). In this method, respondents use focus and picture charts to support the class discussion process by students by displaying PowerPoint made by students (TK-Pn).

During the group discussion, students are guided by the teacher to explain the phenomena contained in the content by using their PowerPoint presentations (TPK-Pn). Respondents used group discussions on these concepts so that students could explore their knowledge and find content in these concepts independently (PCK-Pn). Apart from that, the respondents also facilitated the students by using the shows that the students had made to help realize the difficulties that were found by the students (TCK-Pn). Based on the TPACK components described, the TPACK ability of AH respondents is included in the Perception Level-Pn category because respondents can identify content difficulties and can identify teaching methods that are appropriate to technology. Respondents, however, could not explain how to use technology to modify content.

b. Respondent WR

In the TPACK instrument, respondents made the material simpler using several keywords from the Hadas and Najismaterial (CK-Cn). As for the various materials, they do not divide the material into a simple form (CK-Pn). Respondents used group discussion learning methods in class and presented impressions or animations of the nervous system (PK-Pn). In this method, respondents use focus, animated videos, and the internet to support the class discussion process by students by displaying PowerPoint made by students sponsored by nervous system animation videos (TK-Cn). During the group discussion, students are guided by the teacher to explain the phenomena contained in the content by using their PowerPoint presentations (TPK-Pn).

Respondents used group discussions on these concepts so that students could explore their knowledge and find content in these concepts independently (PCK-Pn). Apart from that, the respondents also facilitated the students by using the shows that the students had made to help realize the difficulties that were found by the students (TCK-Pn). Based on the TPACK components described, the WR respondent's TPACK ability is included in the Perception Level-Pn category because respondents can identify content difficulties and teaching methods that are appropriate to technology. However, respondents could not explain how to use the technology.

c. Respondent AM

Respondent AM presented material briefly, starting from the understanding according to experts and presenting various kinds of hadas and unclean, including examples of Hadas and Najis(CK-Cn). Meanwhile, for several types of hadas and najis, the respondents did not identify simple materials (CK-Pn). Respondents used discussion, information, introduction, and assignment learning methods in class (PK-Pn). In this method, respondents use focus, whiteboards, markers, laptops, and CD players to support the discussion process by students by displaying PowerPoint made by students and several shows in the form of videos played using a CD player to support students' conceptualization of content (TK-Cn).

During the discussion, students are guided by the teacher on complex material to explain the difficulties of the phenomena contained in the content by using the PowerPoint presentation supported by video to deepen the concept of neurons and the division of the nervous system in students (TPK-Pn). Respondents used the discussion learning method to convey Hadas and Najis(PCK-Pn) examples. Apart from that, respondents also facilitated students by using shows that students had made and videos to help realize the difficulties found by students (TCK-Pn). Based on the TPACK components described, AM respondents' TPACK ability is included in the Perception Level-Pn category because respondents can identify content difficulties and identify teaching methods that are appropriate to technology. However, respondents could not explain how to use the technology.

3. TPACK Ability of PAI MTs Teachers on Hadas and NajisMaterial

a. TPACK Planning on Hadas and Najis Material

Based on the TPACK instrument filled in by the teacher, MTs PAI teachers can design TPACK according to Hadas and Najis material, especially in-class presentations and discussions. This is due to the demands of the 2013 curriculum, which requires students to find the concepts in the material themselves. In addition, technological support in the presentation and class discussion process is only in the form of a series of information display PowerPoints

made by groups of students. However, some teachers use videos and animations to support the learning process. In the learning process, the teacher only appears as a teacher. When there is material considered problematic, the teacher begins to guide students to look for difficulties and provide concepts in complex content so that students can find them quickly and eventually overcome the problem of the idea themselves.

b. Implementation of TPAC on Hadas and Najis material

Based on the analysis of the TPACK instrument that the teachers have filled out, the ability of MTs PAI teachers to implement the TPACK component on Hadas and Najismaterial in class is included in the Perception Level-Pn category. At this level of perception, the teacher already has a perception towards harmonization of the TPACK components because, through presentations and discussions, the teacher can identify content difficulties so that they can transform them into simple content forms with support from the use of appropriate technology, namely a set of infocus, videos, and animated shows. This shows that West Lombok MTs teachers can identify content difficulties and teaching methods appropriate to technology. However, the teacher cannot explain how to use technology to change the content that the teacher will provide to students, so the teacher's knowledge is only centered on using infocus, videos, and animated shows in the teaching process that the teacher does in class.

4. Factors Affecting MTs Teacher TPACK Ability

Based on the TPACK instrument analysis, one factor that influences TPACK's ability is the amount of learning experience teachers gain through seminars held by the government and teacher professional organizations to improve teacher quality. So that the length of teaching experience is not directly proportional to the increase in TPACK abilities. This is influenced by many factors, including the busy schedule of senior teachers, causing senior teachers not to be able to take the time to learn new things, especially technological advances in supporting the teaching process in class. Therefore, most senior teachers still apply conventional learning methods. In contrast, teachers with 6-10 years of teaching experience can still transform their classrooms using technology. This is because the busyness of teachers with teaching experience of 6-10 years is not as busy as that of teachers with teaching experience of 11 years or more.

D. CONCLUSION

The conclusion is that the Technological Pedagogical Content Knowledge (TPACK) ability of Madrasah Tsanawiyah (MTs) teachers in West Lombok Regency, NTB on Hadas and Najis material shows (a) there is no difference between group A and B in the level of TPACK ability. There is a difference in the length of teaching experience a teacher has. The planning and implementation capabilities of TPACK MTs teachers are limited to the use of in-focus and its tools along with whiteboards and markers, which are implemented in the process of teaching and learning activities using the presentation method in a class by each group of students. Research on the ability of TPACK is still very new and has not been widely studied in Indonesia, so this research is still straightforward. Therefore, the researcher hopes that after this research on TPACK is published, there will be many further studies on TPACK for teachers.

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