



## Implementation of ICT-Based Learning Media in PAI Subjects at SMK N 5 Padang

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### Abstract

*This research explores the application of Information and Communication Technology (ICT) in developing Islamic Religious Education (PAI) learning media. This research aims to provide a flexible and engaging learning experience for students while aligning it with the principles of Islamic education. This research uses qualitative research methods with field research type. Researchers used data collection methods, namely observation, interviews and documentation. Data sources were taken using purposive sampling techniques with informants namely school principals and teachers. Data analysis techniques use data reduction, data presentation, and data verification. This research advocates for strategic planning and investment in ICT infrastructure, along with ongoing professional development for teachers to ensure the successful integration of technology in PAI classrooms. In conclusion, the implementation of ICT-based learning media in the context of Islamic education shows promising potential for improving the quality of PAI teaching. This research provides valuable insights and recommendations for educators and policymakers who wish to utilise technology to improve the overall effectiveness of Islamic education.*

**Keywords:** Implementation, ICT-based learning media, PAI learning

### INTRODUCTION

The progress of a nation is largely determined by the quality of Human Resources (HR). If the Indonesian nation wants to take part in the global arena, the first step that must be taken is to organize its human resources, especially regarding emotional, spiritual, creative and moral aspects, in addition to intellectual aspects. Human resource management must be pursued gradually and continuously through a quality education system, both informal, formal and non-formal, starting from basic education to higher education (Hotma, 2018; Negoro et al., 2023)

Currently, Indonesian education is facing three major complex challenges: First, the challenge of developing added value, namely how to develop added value to develop productivity, growth and economic equality as an effort to maintain and

develop sustainable development. Second, the challenge of carrying out a comprehensive and in-depth study of changes in the structure of society from an agrarian society to one industrial society that controls technology and information, has implications for the demands and development of human resources. Third, challenges in increasingly strong global competition, namely how to increase the nation's competitiveness in increasing quality works that can compete as a result of mastering science, technology and art (Primayana, 2020; Putra, 2019).

These three challenges also penetrate Islamic religious education. The use of Technology, Information and Communication (ICT) for education has become an absolute necessity. ICT has become a solution for increasing the efficiency of delivering learning material. Almost all countries in the world are competing not only to master this technology to improve the quality of society, but are furthermore trying to use ICT as one of the keys to realising the competitive advantage of nations, including Indonesia. Therefore, it is necessary to expand ICT-based education in Indonesia. Where currently ICT-based education is not widely understood by the wider community, so there must be examples of the application of ICT in a school. One approach and method that can be used to improve PAI learning is the use of Technology, Information and Communication (ICT) in the learning process (Fauziyati & Mariana, 2024; Nirmala et al., 2024; Waluyo, 2021)

The extraordinary variety of ICT capabilities should be utilized in the world of education to create a better education system, both in terms of infrastructure, increasing the professionalism and quality of the human resources of educators (teachers) as well as forming quality students (ASRIANA, 2023). Islamic religious education usually uses very monotonous learning methods such as the lecture method so learning becomes very boring. With the presence of ICT-based learning media, the teaching and learning process becomes more meaningful varied and lively, which can visualize material which can make it easy for students to understand and make it easier for educators to explain the material (Darimi, 2017; Lailiyah & Mardliyah, 2021)

The availability of ICT-based learning media at SMKN 5 Padang has been around for a long time It started in 2014. Based on initial observations on 16 February 2023 in SMKN 5 Padang, it is known that it has quite complete supporting facilities for

ICT-based learning, for example, it has a multimedia room, several PCs, laptops, LCDs, electricity and an internet network. So these supporting facilities are very suitable for implementation in all learning processes, one of which is ICT-based PAI learning.

## **METHOD**

This type of research is field research that uses a qualitative approach (Sidiq et al., 2019). The research location is at SMK N 5 Padang which is in Lolong Belanti, North Padang District, Padang City. The data sources in this research are divided into 2, namely primary data, namely school principals, there is among six-person of PAI teachers and three students of SMK N 5 Padang in grade XI TKJ. while the secondary data in this research are documents from SMK N 5 Padang. Data collection techniques in this research are observation, interviews and documentation. The data analysis techniques used in this research are data collection, data reduction, data presentation and data verification. Data validity techniques in this research are source triangulation and data triangulation.

## **RESEARCH FINDINGS**

### **Overview of SMKN 5 Padang**

Based on RI MENDIKBUD Decree No. 0303/0/1975 dated 2 December 1975 Vocational High School (SMK) 5 Padang was originally called Padang Secondary Technology School (STM). SMK Negeri 5 Padang was founded in 1952 and was originally located on Jalan Baru Andalas No. 5 Simpang Haru Padang. Now, SMK Negeri 5 Padang is located at Jalan Beringin No. 4, Ex. Lolong Belanti, District. North Padang, Padang City, West Sumatra.

Through the development of technological education and the number of applicants, as well as assistance from the government to establish BLPT with the requirement that there must be a minimum of 3,000 students or 3 (three) practising schools, the school was divided into two, namely the Padang 1 State Secondary Technology School (STM) and the Padang 2 State Secondary Technology School (STM). In 1980 STM Negeri 1 and 2 began carrying out the learning process with teachers who taught at the main school and practical equipment located at BLPT Padang.

In 1976 STM N 2 Padang was moved to Jalan Andalas because the location of the learning process in Simpang Haru did not meet standards due to the great interest of the people of Central Sumatra, especially people from West Sumatra.

In 1985 all PBM activities at STM N 2 Padang were completely moved to Jalan Beringin No. 4 Lolong Padang which has a land area of ± 11,672 m<sup>2</sup> due to the even distribution of technology education areas in Padang City. Based on government regulations through RI MENDIKBUD Decree No. 036/0/1997, the Middle Technology School changed its name to Vocational High School and STM N 2 Padang changed its name to SMK N 5 Padang. (Official Archives 2002 SMK N 5 Padang).

Since the issuance of the National School/Madrasah Accreditation Board decision no. 1347/BAN-SM/SK/2021 on December 8 2021, SMK N 5 Padang was accredited with the predicate B (good) with a score of 90. This accreditation is valid until December 31 2026. Based on data school from SMK N 5 Padang in 2021 there are 96 (ninety-six) teachers at SMK N 5 Padang, consisting of 38 (thirty-eight) male teachers and 58 (fifty-eight) female teachers. The number of students at SMK N 5 Padang is 1,253 people consisting of 1,156 men and 97 (ninety-seven) women. SMK N 5 Padang has 29 (twenty-nine) study rooms, 1 (one) language laboratory, 1 (one) computer laboratory, 1 (one) library, 2 (two) teacher sanitation and 2 (two) student sanitation.

### **Utilization of ICT Learning Media in PAI Learning at SMK N 5 Padang**

The use of information and communication technology-based learning media is implemented with several learning steps as follows:

#### **Learning Planning**

The first stage of preparation is carried out by teachers when they want to use technology-based learning media, including making lesson plans, looking for teaching materials, preparing PPT, laptop with fully charged battery, LCD to HDMI cable, and sound system so that learning can run smoothly. The statement of Mrs Eswinangsih, S.HI., M.Pd., Gr. which states that :

*"The initial preparation for using IT-based media is to prepare equipment such as a laptop with a full battery, LCD and normal cables plus bring your own HDMI, then prepare backup sound if you can't use it in class. " Apart from that, preparing*

*teaching materials starts from PPT, then Microsoft365 to display the material as well as holding a pre-test and post-test, because for exams you are already used to the form from Microsoft." (Interview, November 20, 2023)*

The results of classroom observations on 16 February 2023 regarding the use of information and communication technology-based learning media in PAI learning in class The lesson plan has been written on the learning media for that day's lesson by showing videos taken from YouTube and PowerPoint of the subject matter.

### **Implementation of Learning**

The implementation of PAI learning using information and communication technology-based learning media in the implementation of using information and communication technology-based learning media in class on that day regarding "Social Media Manners". After conveying the title of the material that would be presented that day, Mrs. Eswinangsih sent a Microsoft Teams form link to the class coordinator which was forwarded to the class group so that it could be accessed by all students using each student's cellphone. Students are given 5 minutes to do the pretest with one question, when the answer is complete on the LCD you can see how many students have submitted it and the time limit for the work is visible. Then, when all the students finished taking the pretest, Mrs. Eswinangsih opened an internet browser to go to the YouTube page and displayed a video about "Social Media Manners" for approximately 10 minutes. After finishing showing the video, Mrs. Eswinangsih opened the PPT to explain again the points from the video that had been written. shown by asking children to record the material in the PPT so that children still have notes at home. Because the lesson time had run out at that time and the material had not been finished, Mrs Eswinangsih closed the lesson that day and said that the next lesson would still discuss the same material. (Observation, February 16 2023)

In the process of implementing the use of learning media in the classroom, Mrs Eswinangsih, S.HI., M.Pd., Gr. stated that:

*"The PAI learning process using IT media is good, the children pay more attention when I display material from the LCD projector rather than just lecturing and writing on the blackboard which requires a longer learning time. "So, I am more comfortable when learning to display material on the LCD, because it's more efficient without me writing long periods of material on the whiteboard," (Interview, 20 November 2023)*

The use of learning media based on information and communication technology by Mrs. Eswinangsih, S.HI., M.Pd., Gr. as a PAI teacher in the classroom also influences the learning interest and grades of students in class XI TKJ, as stated by Jenica Anastasya:

*"It has quite an effect, because if you continue to lecture it makes you bored and your concentration decreases, whereas if you use media such as watching videos it's less boring, so it has quite an effect on my interest in learning and also my grades"*  
(Interview, 13 November 2023)

Jenica's statement above is reinforced by a statement from Faiz Danurahman, a class XI TKJ student who stated:

*"Regarding the difference in interest in learning when using or not using IT-based media, there are both interests, whether you want to use it or not, Mrs. "As for the grades, thank God, they were fine from before, but using media was better because Mrs. Nangsih had summarized them and then displayed them on the screen."*  
(Interview, November 13, 2023)

The same thing was conveyed by Nurul Fauziah a class XI TKJ student who stated:

*"It seems like the assessment is the same, but if you use IT-based media it makes it easier to enter the material."* (Interview, November 13, 2023)

The aim of using information and communication technology-based learning media in historical material is as a form of variation in learning as well as providing a real picture for students so that learning is more interesting and not boring, because the focus of students quickly decreases and makes students sleepy when the material is delivered through the lecture method.

### **Learning Evaluation**

Evaluation is a planned activity to determine the condition of an object using instruments and the results are compared with benchmarks to conclude. In this case, to determine whether PAI's learning objectives have been achieved regarding the introduction of Islam to the archipelago, there needs to be a learning evaluation. The evaluation process in learning at SMK N 5 Padang has been integrated with Microsoft Teams which is accessed using students' cellphones, both from pretests, posttests, mid-semester assessments and final semester assessments. However, for PAI lessons, when there is a written Arabic test, a written test with paper is still used.

The above statement regarding evaluation activities carried out by SMK N 5 Padang was reinforced by Mrs Eswinangsih, S.HI., M.Pd., Gr. as a PAI teacher for class XI TKJ, he stated that:

*"For evaluations at SMK N 5 Padang itself, since the pandemic, it has been non-written, so all the reviewers for homework assignments, PTS, and PAS have used exams via Microsoft 365 via the form. So I usually conduct pretests and posttests via Microsoft, but in Microsoft 365 you can also connect to quiziz. So it can be more delicious and there are variations in appearance too for daily tests. because since the pandemic, schools have emphasized being smarter about IT, like designs from Canva, continuing to make interesting PPTs, and making questions on Microsoft and Quiziz forms. But at PAI there is still a paper test, because if you write Arabic verses you have to do it on paper. "This is not yet effective because one teacher handles many students, approximately 30, which is very insufficient, especially since the conditions of students during learning are different" (Interview, 20 November 2023).*

In using information and communication technology-based learning media in the classroom, the ability of Mrs. Eswinangsih, S.HI., M.Pd., Gr. looks quite good in terms of initial preparation before learning, during the implementation of learning, and evaluation of learning. Mrs. Eswinangsih, S.HI., M.Pd., Gr. using information and communication technology-based learning media. This is the opinion of Faiz Danurahman, a class XI TKJ student who stated that:

*"It's quite good for the ability to use information and communication technology-based media that Mrs. Nangsih uses. It's just that the theme or background in the ppt could perhaps be more varied to make it more interesting to look at." (Interview, November 13, 2023).*

The same thing was expressed by Jenicca Anastasya, a class XI TKJ student who stated:

*"In my opinion, it is quite good for Mrs Nangsih's use of media, because I prefer watching videos, then reading the material on the ppt on the screen." (Interview, November 13, 2023)*

The opinions of Faiz and Jesica above are reinforced by the opinion of Nurul as a class XI TKJ student who states that:

*"The ability to use IT-based media is very good, because Mrs. Nangsih herself, even though she uses the media on the LCD, Mrs. Nangsih still explains the material in the media in a way that is easier to understand. We were also asked to write down the points that had been summarized by Mrs. Nangsih via ppt, sometimes also watching films." (Interview, November 13, 2023)*

The above statement is supported by the opinion of Mrs Eswinangsih, S.HI., M.Pd., Gr. as PAI teacher coordinator stated:

*"From the use of media, Mrs. Nangsih is already quite good. But for Mrs Nangsih, in my opinion, there is enough balance between the use of media and the way she teaches in class. Because usually there are good uses of media but the way of teaching in class is not good and then the material presented will not be optimal either." (Interview, November 17, 2023)*

Apart from that, Mrs. Eswinangsih, S.HI., M.Pd., Gr as PAI teacher for class

*"For materials that use IT-based learning media, I use all PAI learning materials because they explain more, rather than having to lecture continuously and sometimes not paying attention, especially if I have to write on the blackboard, it also takes quite a long time. So, it's better if I use the school's facilities to the fullest with all the available material. "But I am also consistent when using technology, I still require students to write, even if only the points that I have summarized so that students understand the essence of the material that I have presented that day" (Interview, 20 November 2023)*

Mrs. Melani's statement above is reinforced by a statement from Faiz Danurahman, a class XI TKJ student who stated:

*"Nowadays, I use it quite often, but yesterday I still often discussed textbooks but sometimes used the media intermittently" (Interview, 13 November 2023).*

The same thing was conveyed by Jenica Annastasya, a class XI TKJ student who stated:

*"Sometimes Mrs. Nangsih uses the media, sometimes she doesn't use the questions. There was also a time when Mrs. Nangsih wanted to use the LCD when the lights went out and ended up not using it" (Interview, 13 November 2023).*

### **Supporting and Inhibiting Factors for Implementing ICT-based PAI Learning Media at SMK N 5 Padang**

Islamic Education Teacher at SMK N 5 Padang In general, the use of Information and Communication Technology (ICT) based learning media cannot be separated from supporting and inhibiting factors, including the following:

#### **Supporting Factors**

The main factor in using information and communication technology-based learning media is adequate infrastructure. The facilities at SMK N 5 Padang itself are quite comprehensive for using information and communication technology-based



learning media. In direct observation (OB-02 and OB-03) the facilities in each class at SMK N 5 Padang are quite complete with whiteboards, LCD projectors, speakers, wifi, AC, lighting, desks and chairs for each student which supports the use of media information and communication technology-based learning.

However, there are still several shortcomings that can be maximized, such as the condition of the LCD cable which often has problems, the speaker cable which sometimes won't connect, and the unstable Wifi speed which is very annoying when playing videos from YouTube. This is by what was conveyed by Mrs Eswinangsih, S.HI., M.Pd., Gr. which states that :

*"The supporting factors must be the opposite of the inhibiting factors, firstly a laptop that is supportive and not slow, increasingly there is a need for additional memory, which in essence requires upgrading the laptop, because sometimes there are old laptops that like to stagnate and won't move or sometimes it turns itself off when used, because now the teacher's requirement to use IT in all learning activities is necessary. "Then fast WiFi is also an influence because nowadays there is nothing on the internet, so you need a fast internet network." (Interview, November 20, 2023)*

From the results of direct observations and interviews with Mrs. Eswinangsih, S.HI., M.Pd., Gr. as a PAI teacher in Class

### **Inhibiting Factors**

In every learning process, not everything can run well and smoothly according to the plan, sometimes teachers have prepared well the learning media that will be used but there are still inhibiting factors or obstacles in the use of information and communication technology-based learning media during classroom observations (OB-02) there was a problem with the LCD cable and sound cable so Mrs. Eswinangsih, S.HI., M.Pd., Gr. asked students for help to get their own LCD and speaker cables from the IT room at SMK N 5 Padang. This is by what was conveyed by Mrs. Eswinangsih, S.HI., M.Pd., Gr. as a PAI teacher for class XI TKJ who stated that:

*"The inhibiting factor is sometimes when my laptop is fussy, so it takes a long time to open PPT and sometimes it can't connect to WiFi. Sometimes in class the lights suddenly go out, that's also an obstacle when we want to use ICT-based media. So you have to turn your brain to be able to change teaching methods so that the material can be conveyed. Because LCD cables and sound are often used, they break up, have errors or the colours are lost and are very annoying. So you need to tell the children to get a new LCD cable in the IT room. The sound is sometimes active but*

*there is no cable and I need to get my sound at the office. Then there's the electricity, and the WiFi when I'm showing videos on YouTube the WiFi has an error so I can't see it or maybe I have to wait a bit. Likewise with my laptop which needs to add more RAM so that it is faster when used." (Interview, November 20, 2023)*

From the results of direct observations and interviews with Mrs. Eswinangsih, S.HI., M.Pd., Gr. as a PAI teacher in Class in learning.

## **DISCUSSION**

Based on the findings obtained in the field regarding the use of information and communication technology-based learning media by PAI teachers in class XI TKJ SMK N 5 Padang, the researcher then carried out an analysis of the data that had been collected. The benefits of using learning media in the students' learning process according to Hujair AH Sanaky (2013: 5) include, creating learning that attracts more students' attention, the meaning of learning materials clearer so that students can easily understand, mastering and achieve learning goals, The teaching methods used by teachers become more varied by not solely using verbal communication with words by the teacher which makes students not bored and the teacher himself saves more to use advances in information and communication technology as well as being a variation of teaching applied in PAI learning at SMK N 5 Padang, which previously emphasized the use of lecture methods and providing monotonous examples in PAI learning so that students are less interested in learning.

Utilization of technology-based learning media information and communication by PAI teachers in class This information and communication makes it easier for both teachers and students to deliver material and receive material delivered by the teacher, as well as making learning activities more varied.

The ability of PAI teachers in class XI TKJ in using information and communication technology-based learning media is quite good based on the results of observations and interviews with class information technology-based learning in PAI lessons. Choosing information and communication technology-based learning media in PAI learning makes it easier for teachers to explain the material to be presented while providing a different learning atmosphere than just explaining using the lecture method (Muammar & Suhartina, 2018; Rani, 2017). PAI teachers use learning media

based on information and communication technology more often because they are easier to use, increase students' attention to the material, and also help teachers in presenting the material to students (Baihaqi et al., 2020; Setiawan, 2019). The use of information and communication technology-based learning media by PAI teachers in Class XI TKJ has had quite a good impact, from the results of interviews with three students in Class of the material so that student's interest in learning and learning outcomes increase.

This research strengthens previous research which shows that the use of information and communication technology-based learning media for PAI teachers can be seen from two things, namely: First, the teacher's ability to plan materials, media, teaching materials and infrastructure before learning, then on the implementation of learning. by using information and communication technology-based learning media and finally evaluating learning. Second, there are inhibiting factors or obstacles faced by PAI teachers in using information and communication technology-based learning media.

## **CONCLUSION**

Based on the results of the research, the researcher explains that the use of information and communication technology-based learning media for PAI teachers runs in three stages, 1) stages of learning planning, 2) learning process, 3) learning evaluation using YouTube, PPT and Microsoft Team 364 media. The inhibiting or inhibiting factors are the teacher's laptop which is slow to use and infrastructure which is less supportive such as the cable connecting the laptop and LCD projector and speakers being damaged, the WiFi network being slow, the electricity sometimes goes out so that information and communication technology based learning media cannot be used in learning.

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