

Learning Technology in Teaching: A Research on Implementation of Technology at Islamic Educational Institutions in Indonesia

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Abstract: Technological developments become a challenge for education to continue to improve the quality of learning. Indonesian Islamic education must also respond and apply technology as an improvement in education and to prepare quality graduates. Therefore, this study aims to look at Islamic educational institutions in responding to technological developments in the current era. So this study used a quantitative design with a survey method with a total sample of 86 respondents from 86 different Islamic educational institutions. Samples were taken randomly using the technique cluster random sampling and convenience sampling. Data analysis uses descriptive statistics which describe the entirety of the respondents' answers. Based on the findings and analysis, two important aspects can be concluded, namely: 1) the use of technology in Islamic education is currently comprehensive, this is evidenced that the percentage of survey results shows above 80% of institutions have implemented technology in their institutions. Of course, this technology has been designed to improve students' abilities both from cognitive, affective, and psychomotor aspects. Not only that, 21st century capabilities are also involved in designing the applied technology, namely 4C, critical thinking, creativity, collaboration, and communication. 2). The curriculum is also designed using existing technology, so that its application can make it easier for both teachers as instructors and students as learners. 80% of institutions have also implemented it. Another thing that became this finding, the institution also provides facilities for teachers to continue to improve their competence both in curriculum development and in the use of technology.

Keywords: Islamic Institution, Teaching Technology, Digital Learning, Curriculum.

1. INTRODUCTION

The quality of education is a very important factor in the world of education itself. This is because good or bad students who are born in an educational institution depend on the quality of education in the educational institution (Wahyudi et al., 2020). Therefore, it is important for an educational institution to improve the ability of its education system, both in terms of management as well as in terms of the educational process itself, in order to form quality students. At present schools have a great responsibility in entering the all-digital era of globalization as it is now (Akour & Alenezi, 2022). For this reason, schools need to prepare students to face the challenges they will face when they graduate.

In this modern era, efforts to improve the quality of Islamic education face serious challenges and fundamental challenges. In the midst of the growing spirit of improving the quality of Islamic education in Indonesia with various quality innovations, technology is present bringing various innovations that have a complex impact on the sustainability of the educational process (Ritonga et al., 2023). Apart from that, under any circumstances the quality of education must be improved, because efforts to ensure the quality of education will have a positive impact on the macro context of the quality of education nationally and globally (Ainscow, 2020). Particularly in Indonesia, Islamic educational institutions are required to be able to read various opportunities, as well as answer the need to improve the quality of Islamic education according to their role.

In discussing education certainly cannot be separated from technology. Technology has a significant role in education where this technology can be a means to support the educational process. With the development of this technology, it requires everyone, both students and teachers, to be able to use technology as well as possible so that the benefits of this technology have a positive impact on educational development and can also make it easier for teachers and students to continue education (Dwijayani, 2019).

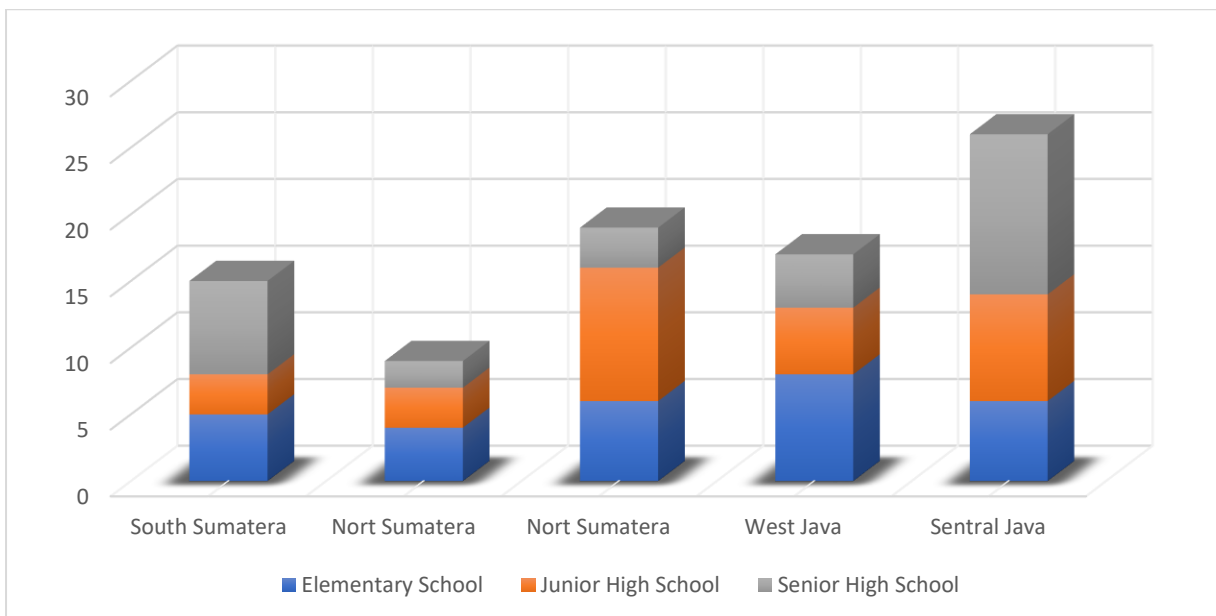
In its use, technology plays an important role in supporting learning activities. For example, with the existence of technology, it can make teaching and learning activities easier because internet access is easily accessible by students. Information from various different sources related to education can also be easily obtained in order to broaden the horizons of students and teachers, then by utilizing technology, the learning system can become more varied and not monotonous so that it can increase students' enthusiasm for learning (Romero & Ventura, 2020). Not only that, the importance of technology for education can also be felt by students and teachers directly or indirectly. With the existence of technology, students and teachers are more facilitated in carrying out their teaching and learning activities and can do everything more quickly, easily, and efficiently.

Technology itself can be adopted by all educational institutions, including Islamic education. Islamic education itself is currently developing very rapidly, this can be seen from the many Islamic educational institutions that have been established by adopting technology-based integrated Islam. Islamic educational institutions currently offer a lot of learning that is more modern and does not leave its Islamic aspects. However, it turned out that in (Komalasari et al., 2020) shows that the governance of Islamic education still leaves problems, including: the quality of teacher resources is still low which has an impact on achieving quality education; limited competence of teachers in utilizing technology; uneven access to Islamic education throughout the country; as well as the issue of Islamic education leadership.

Findings (Sidani, 2019) describe that Islamic education institutions in Islamic education are still limited in the use of technology, financial crises, and hampered in pedagogical aspects so that they are considered to have a significant influence on the progress of Islamic education. Meanwhile, the results of (Al-Rahmi et al., 2022) shows that student satisfaction with the quality of learning can be done by constructing educational guarantees for teachers and students, formulating indicators of learning achievement in accordance with the demands of the times and students' thinking levels, and designing technology-based learning content. Therefore, based on this previous research, researchers are interested in exploring how the development of Islamic education responds to the times and utilizes technology in learning.

2. METHOD

This study used a quantitative research design with a survey method. The research will describe and explain in detail the problems studied, namely strategic planning management innovations to improve the quality of Islamic education and the use of technology to improve the quality of Islamic education. The results of the research will be described from the responses and answers of the respondents. Strategic plans for Islamic education and the use of technology will be described factually, systematically, and accurately using quantitative measuring instruments and describing the overall sample in the form of numbers. The sample in this study was taken randomly and was selected based on the availability of respondents and the ease of obtaining data using a cluster random sampling technique combined with convenience sampling, totaling 86 respondents from 86 Islamic educational institutions in 5 provinces in Indonesia. Which is described as follows:



The data collection instrument used a questionnaire which was distributed to respondents, namely teachers from Islamic educational institutions in Indonesia. The development of this questionnaire consists of two aspects which will become the data in this research theme, namely: The instrument questions are categorized as many as 12 questions with the results of the validity and reliability tests of the instruments that the researchers carried out using Microsoft Excel 2019. Overall the question items were declared valid and reliable. Whendirection greater than r table with a confidence level of 5 percent, namely 0.23, then the item is declared valid. Overall, the question items were declared valid because they were greater than 0.23. The reliability will be seen from the value of Cronbach's Alpha which is greater than 0.60 so that all items are declared reliable. The reliability results obtained were more than 0.60, namely 0.77. Data analysis test was carried out with descriptive statistics. Data from each question was obtained directly after distributing the questionnaire via Google Form. All data were analyzed through tabulation by changing the respondent's answer choices to scores 1, 2, 3 and 4 according to the instrument score table. The total score is then determined followed by calculating the average. All data is processed and analyzed using Microsoft Excel.

3. RESULTS AND DISCUSSION

Successful Implementation Begins with Good Planning

Technological developments require Islamic educational institutions to reconstruct the orientation of educational institutions. Respondents who came from managers and principals in Islamic education said that they redesigned the goals, indicators, models, and insights of Islamic education from the institutions they lead. Educational planning design is an important part of building a quality education quality ecosystem (Kumari et al., 2020). Of course, the educational planning design that is formulated must be in accordance with the needs of the times and the current condition of education.

The results of planning the use of technology in Islamic education are as follows:

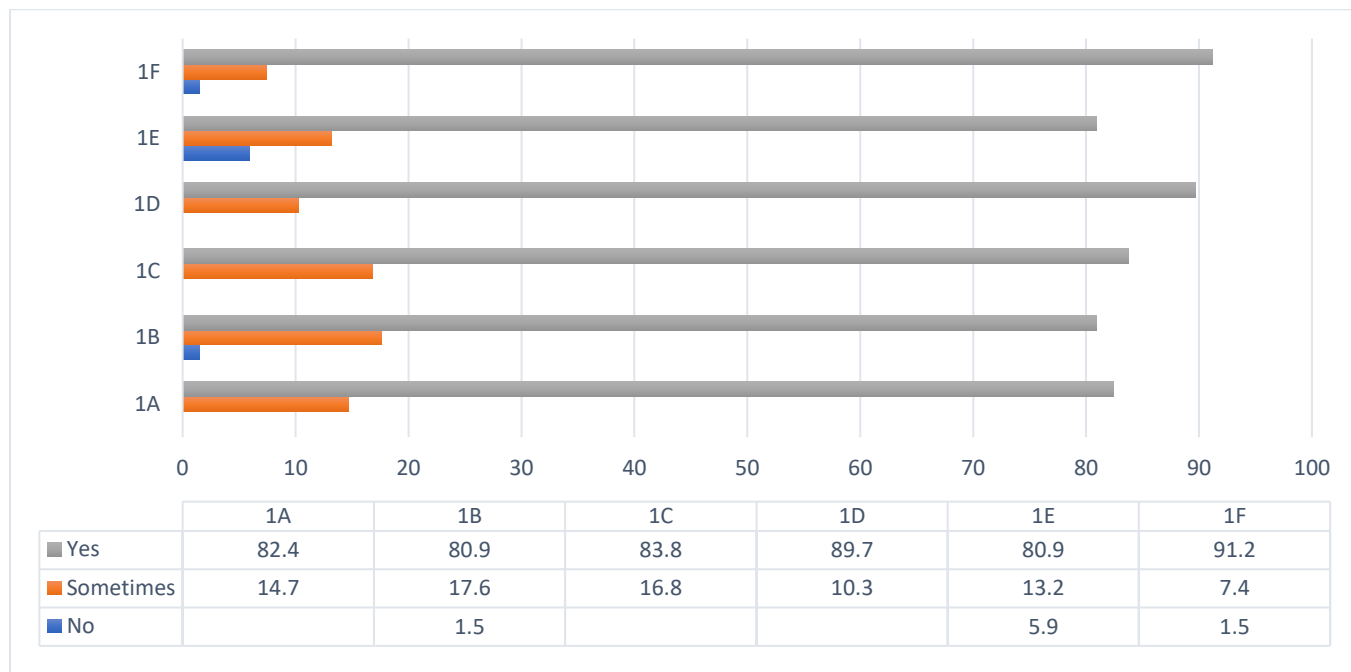


Figure 1. Figure of response from the use of technology in Islamic education

Information:

1A	:	Develop a plan to utilize technology
1B	:	Defines the technology used together
1C	:	Formulate steps to improve the quality of Islamic education
1D	:	The quality of Islamic education in technology development includes cognitive, affective, psychomotor aspects
1E	:	Applying technology to improve 4C skills in learning
1F	:	The use of technology is done by a teacher who is competent in his field and that is you

Based on the results of the questionnaire in Figure 1 above, as many as 82.4% of respondents stated that they had made arrangements to utilize technology. As many as 14.7% of respondents said that sometimes they make such plans. That is, from the data generated as many as 86 Islamic educational institutions the majority develop strategic plans to utilize technology. Establish technology that is used jointly with several related parties who have the same commitment in achieving common goals such as stakeholder institutions, parents, as well as students (Wikoff, 2017). Based on the data in point 1B regarding the establishment and utilization of the technology itself, it is proven that an average of 80.9% of respondents apply it. Another 17.6% of respondents said that only occasionally a few parties were invited to the drafting.

In fact, planning for the arrangement of quality assurance of Islamic education in Indonesia faces various obstacles and problems. The big obstacle that arises at this time stems from the difficulty of designing learning patterns that are truly in accordance with the conditions of students, teachers and the community in the educational environment (Fagerholm et al., 2018). The rapid development of technology is not surprising that many educational institutions experience severe shocks and panic in planning to realize the big goals of education. In fact, not a few educational institutions have experienced a decline in the quality of education in the midst of this era. Therefore, it is necessary to formulate strategic and targeted steps to restore the image of education. As many as 83.8% of respondents stated that they had formulated steps in realizing plans to improve the quality of Islamic education and as many as 16.2% of respondents occasionally did this. It is not easy to formulate a plan of steps to improve the quality of Islamic education in this situation, because you need to adapt and know a lot and explore the technology itself. According to (Komalasari et al., 2020) Islamic educational institutions or Islamic education can propose three steps that can be used as a basis

for preparing steps to improve the quality of education: (1) increasing teacher competency; (2) provision of digital-based learning spaces; and (3) material selection up to date in accordance with the demands of global development.

However, respondents have the same thoughts in terms of preparing an education quality management plan by considering the cognitive, affective, and psychomotor aspects of students. When the educational orientation is dominated by students as educational objects, these three aspects should be the main foundation that must be considered (Enneking et al., 2019). Based on the data in Figure 1, in point 1D regarding improving the quality of Islamic education including cognitive, affective, and psychomotor competencies, as many as 89.7% of respondents apply these three competencies in learning. It is undeniable that as much as 10.3% of respondents on average still rule out the principle of student skills as the basis for preparing an education quality management plan. As a result, there is a void in values and attention to developing student skills (Jackson, 2017). Whereas the cognitive, affective, and psychomotor aspects of students occupy an urgent position in improving the quality management of Islamic education in Indonesia.

In addition, when the issue of globalization is linked to management of educational quality, student skills are the main capital that must be improved in order to be able to face challenges and opportunities in the global era (Susanto, Ritonga, et al., 2022). Basically, the flow of globalization leads people to conditions culture shock where people are in a state of shock enjoying new cultures that emerge in everyday life. However, every student is required to be tough in facing all kinds of changes that occur due to global developments. As a result, the habits that have always been carried out by the community will fade and be replaced by new habits based on the incoming foreign culture. (Ritonga et al., 2022) predicts that students will more easily adapt to new cultures that enter their lives if learning at school is complemented by increased student competence. Skills in this era are also required to be possessed by learners, such as critical thinking skills and problem solving, creative, communicative, and collaborative or what is commonly referred to as 4C (Susanto et al., 2022). From the available data, some respondents also pay attention to these four skills so that students can compete amidst the current pace of globalization. In the fifth point viz1E as much as 80.9% of respondents apply these four skills. Unfortunately, some other respondents still do not pay attention to this skill and put it aside.

Not limited to student skills, teacher competence also occupies a strategic position in the learning aspect for education quality. In determining and planning learning in this modern era, the overall learning targets must be planned by professional and competent teachers. As for the existing data, 91.2% of research respondents said that overall the management plan for the quality of Islamic education was designed by teachers who were competent according to their respective fields. Only 1.5% of respondents submitted planning to teachers who are experts in their field. In fact, in order to create quality Islamic educational institutions, teacher competence is very important (Komalasari et al., 2020). The main factor for the low quality of education at this time is due to the condition of the teachers who are still poor mismatch in two conditions: First, the placement of teachers is not evenly distributed across educational institutions so that the classification of superior schools and lagging schools emerges. Second, the material taught by the teacher is not in accordance with the competency standards (Ainscow, 2020). The impact is the teacher's low mastery of the material to be presented to students. If examined in more detail, teacher competence varies greatly. In fact, not a few teachers have below standard competence. This can be seen from the various narratives of school principals who complain about the lack of competency in understanding teachers about the field of study they are engaged in.

Technology as a Support for Islamic Education Curriculum in Indonesia

Seeing the rapid developments in this era, requires all parties to be able to revise the appropriate educational curriculum. Technology-based curriculum is the integration of features or products derived from technology in the curriculum, which can be in the form of hardware or software features, with the aim of facilitating the process of delivering data to students so that education becomes efficient and enjoyable. In combination, technology is related to the main curriculum as the bottom in the formulation of goals, for the fulfillment of educational materials, educational strategies, and assessment. The main position of technology as a tool to help achieve curriculum goals.

Based on the research results, 86 respondents stated that they had made adjustments to the technology-based curriculum, as can be seen in Figure 2.

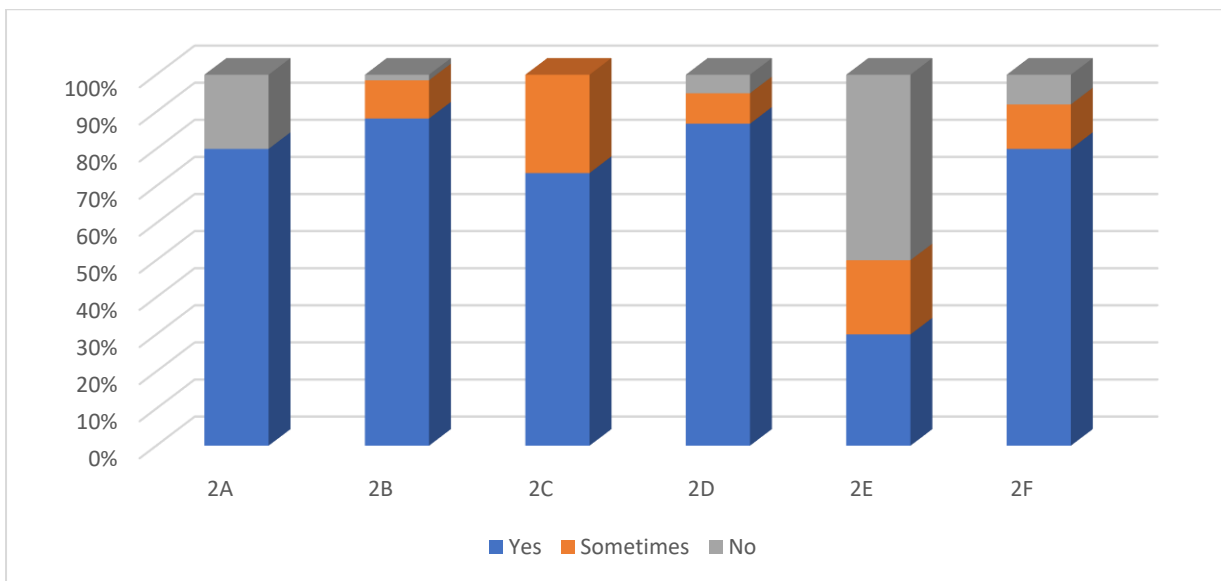


Figure 2. Technology-based Islamic Education Curriculum Planning

information:

2A	:	The curriculum must be in accordance with the times by adopting technology
2B	:	The school curriculum is adjusted to the current condition of students
2C	:	Arranging and preparing learning tools properly
2D	:	Utilizing educational technology in learning
2E	:	Facilitating teachers to develop competence
2F	:	With the existence of a technology-based curriculum, it is easier for teachers to convey learning

The data in Figure 2 comes from the first statement regarding curriculum management which must be adapted to developments in the technology-based era. Adjustment of the Islamic education curriculum in this modern era is a necessity as well as providing solutions to various changes and threats in education. As many as 91.2% of respondents stated that their institution helped adjust the curriculum by adopting technology, this has been done since technology emerged and was adapted to national policies, and as many as 1.8% of respondents sometimes. In addition to adjusting to curriculum policies, the government is currently still evaluating and making improvements in revamping the curriculum so that it can adapt to the conditions of the current era and the needs of students. However, it is entirely up to the respective schools to plan and design the curriculum (Wahyudi et al., 2020).

The planning process must be carried out collaboratively by involving stakeholder such as principals, teachers, and others. The scope of planning must include all components, namely curriculum planning, special services, community relations, learning facilities, and the learning situation that exists in the school (Nurabadi et al., 2018). Data obtained from statements regarding the use of a curriculum that is adapted to the conditions and characteristics of students at school, as many as 88.2% of respondents implemented curriculum planning by taking this into account. However, not a few Islamic education neglect in curriculum planning by not paying attention to the availability of students from these institutions. As many as 10.3% of respondents stated this negligence. (Chibiko Offorma, 2016) explains that good curriculum planning by involving various parties and considering various things will have a major influence on the learning activities carried out.

Students as educational objects need to be involved in curriculum development because they will experience the learning process in a different situation than before. If many students are forced to stay in class because the curriculum policy is not relevant to their needs, then this is an indication that the student's needs are not in accordance with the curriculum policy. Consequently, the curriculum needs adjustment. Curriculum adjustments are based on the psychological aspects of students. Psychology is the science that studies human behaviour, while the curriculum is an attempt to determine educational programs to change human behaviour. Therefore, curriculum development must

be based on psychology as a reference in determining what and how behaviour should be developed (Rigby & Ryan, 2018). Students are individuals who are in the process of development, such as physical/physical, intellectual, social, emotional, and moral development so that the presence of the teacher is important to optimize their development.

Teachers have a role in educating the nation's children as transfer knowledge. In implementing the emergency situation curriculum, teachers are required to be able to perform additional tasks including: First, carry out a learning process that is oriented toward achieving academic and non-academic intelligence targets; as well as preparing material and evaluating the learning process; second, ensuring the safety of students, both physical and psychological safety (Turner & Harder, 2018); third, provide character strengthening; fourth, building mentality and providing emotional support for the continuation of the learning process of participants with all forms of existing limitations (Susanto et al., 2022); fifth, carry out active communication and good cooperation between fellow teachers, principals, parents, and students to build students' self-confidence.

Teachers are required to create innovation and creativity in preparing learning tools. As much as 73.5% of Islamic education develops learning tools, such as objectives, materials, methods, and media based on the needs of students. However, there are still 26.5% of Islamic education who ignore this. That is, based on these data there are still Islamic education that have not consistently demanded their teachers to be more creative in learning. In fact, innovative and creative teachers will be able to diagnose problems that arise from students and be able to overcome these problems, both academic and non-academic problems (Akour & Alenezi, 2022). Another advantage of creative and innovative teachers is being able to create an active and fun learning environment for students so that the learning process can run well. A creative teacher will arrange teaching materials and formulate learning objectives according to the needs of the development of students' thinking power (Tu et al., 2018). The aim of achieving the education of students is currently directed at developing a spiritual attitude, breadth of knowledge and insight, adaptive to the times, and having a high social attitude.

Forming students' critical skills is an educational goal to respond to the demands of a very massive globalization development. This modern era gave birth to ideas and creative ideas in carrying out quality learning activities that had never existed before. Global skills are also known as 21st century life skills which are interpreted as critical thinking, creativity, communication, and collaboration. These four skills must be owned by teachers and students to be able to take opportunities and face the challenges of the 21st century. The creativity of teachers in designing online learning also plays an important role. An attractive learning design is able to create a learning atmosphere that is fun, full of meaning, arouses creativity, critical thinking, and is able to make students independent (Hadinugrahaningsih et al., 2017).

The teacher occupies an important position in formulating the learning objectives to be achieved. Thus, teachers are required to be able to design and design effective online learning, by utilizing the right platform and in accordance with the material and methods being taught. Based on the fourth statement regarding the use of technology adapted to learning tools, 86.8% of respondents stated that their institution utilizes several learning technologies. However, 13.2% of respondents stated that their Islamic education still needed adjustments to the use of technology in learning. In essence, online learning provides broad opportunities for students to explore teaching materials. At the same time, the teacher can choose and determine the right application to be used to convey teaching material. A digital platform that continues to evolve today and can be fully accessed and used (Fawson et al., 2022).

Using digital platforms and creating a professional curriculum certainly requires the competence of teachers and students in operationalizing technology (Khaira et al., 2021). Of course, this is a challenge for all teachers in Islamic educational institutions, as well as an opportunity to increase their competence. Because in the era of global development, it is not enough for teachers to only have professional, pedagogic, personal and social skills, but also must have the skills to use information technology to support digital-based learning processes. However, from the data obtained, only 30% of respondents said that institutions were also involved in competency development and training in digital use. Another 50% said that they only need to learn independently to understand existing technological developments and apply them.

Using technology can support learning, students often feel monotonous with learning that just happens. However, with the existence of technology, teachers can make learning more fun by displaying videos that attract students' attention so that they pay more attention to the lessons explained by the teacher. Not only paying attention to students

is also easier to understand and proven to improve learning outcomes. In this case as many as 80% of teachers feel very helped by this technology. Good in conveying learning also makes students more interested in participating in learning in class. However, another 20% are still unsure about using this technology. It is not known whether because of mastery or not used in learning.

4. CONCLUSION

Based on the research formulation regarding the important role of technology in learning to improve the quality of education which has been described, it is illustrated according to the response from the respondents' answers as follows: first, the use of this technology has been jointly planned for its application in learning, the steps in its use are emphasized to improve students' abilities both in cognitive, psychomotor, and, affective. Not only that, seeing the current developments in technology in learning, it is also hoped that it can improve students' 4C abilities, namely critical thinking, creativity, communication, and collaboration. The institution also expects that every teacher can have this competency, especially in applying technology in learning. Second, the curriculum also has an important role in improving the quality of Islamic education. Therefore, the institution also designs this curriculum by adopting technology. However, the institution also emphasizes that each curriculum created must be adapted to the conditions of the students. The use of the curriculum in learning and the technology in it is expected to make it easier for each teacher to convey material, as well as students in receiving material.

On the other hand, a strategic role stakeholder institutions like school managers, educators, education staff, students, parents, and the community need to be maximized and encouraged to work together in creating a quality culture so that Islamic education continues to innovate in the midst of a crisis and continues to improve making various technology-oriented breakthroughs. We hope that the application of this technology is not limited to modern Islamic educational institutions, but also Islamic education such as madrasas, Islamic boarding schools, Islamic boarding schools also participate in developing even better learning. The current technological facilities and curricula can be further developed and utilized as best as possible for the institution. This research is limited in the scope of the study impact in the use of technology itself, both positively and negatively, so that it becomes an attractive opportunity for academics, scholars, researchers, and educational observers to carry out further studies

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