Challenges of Using Information Technology in the Needs Analysis Design Process for Islamic Religious Education Learning

Siti Wildan Diniati
Babakan, Maja, Majalengka
Falahul Huda Boarding School

Email: sitiwildan230@gmail.com

Abstract: In the 5.0 era, information technology has become an essential element of human life, particularly in education. With the availability of increasingly sophisticated information technology, education is rapidly evolving. The purpose of this study is to look into the usage of information technology in the needs analysis design process for Islamic religious education learning. The method employed is a qualitative approach with a case study method. This study was conducted at SDN Cengal 2 with Islamic religious education teachers as the sample. Data collection methods include observations, interviews, and documentation studies. The use of technology at SDN Cengal 2 in the learning needs analysis design process has been implemented, but there are several obstacles due to a lack of knowledge and skills in using various information technologies, as well as limited facilities and age issues. In terms of implementing information technology, laptops will be used to assist in determining Islamic religious education learning demands. In conclusion, the use of information technology can help in the process of analyzing learning needs. Still, schools must continue to make efforts to support the skills of teachers to face current challenges and to support the design of learning needs.
Keywords: Information Technology; Islamic Religious Education Learning; Needs Assessment Process

Abstrak: Di era 5.0, teknologi informasi sudah menjadi bagian yang tidak terpisahkan dari kehidupan manusia, terutama dalam bidang pendidikan. Pendidikan menjadi semakin berkembang dengan kehadiran teknologi informasi yang semakin canggih. Tujuan penelitian ini ialah untuk menggali informasi mengenai penggunaan teknologi informasi dalam proses rancangan analisis kebutuhan untuk pembelajaran PAI. Metode yang digunakan yakni dengan pendekatan kualitatif dengan metode studi kasus. Penelitian ini dilakukan di SDN Cengal 2 dengan guru PAI sebagai narasumber. Teknik pengumpulan data dengan observasi, wawancara dan studi dokumentasi. Adapun penggunaan teknologi di SDN Cengal 2 dalam proses rancangaan analisis kebutuhan pembelajaran sudah diterapkan, namun ada beberapa kendala dikarenakan kurangnya pengetahuan serta keterampilan menggunakan teknologi informasi yang bervariatif, selain itu keterbatasan fasilitas, dan faktor usia. Kesimpulannya, penggunaan teknologi informasi dapat membantu dalam proses menganalisis kebutuhan pembelajaran, namun sekolah harus senantiasa terus melakukan upaya agar menunjang skill para pengajar untuk mengahadapi tantangan saat ini dan untuk menunjang rancangan kebutuhan pembelajaran.
Kata Kunci: Pembelajaran Pendidikan Agama Islam; Proses Analisis Kebutuhan; Teknologi Informasi

INTRODUCTION

In human life, education has a significant role in regulating all aspects of life. In general, education is known as a fundamental basic need for individuals on their journey towards improving their quality of life (Ariyantika et al., 2019; Mustamila, 2021). In meeting these basic needs, education is always required to develop and adapt to current developments, as currently, education has been influenced by advances in information technology, which has become an integral part of the educational process itself (Nuryana, 2019).

In education, information technology has produced many of the latest innovations in the education sector since the start of the COVID-19 pandemic (*Corona Virus Disease* 2019), which has hit since 2019 until the end of 2021. This was triggered by regulations related to the implementation of online learning (on the network) which require educational institutions to create effective learning systems and teaching media for students and teachers to be able to carry out the learning process by teaching at home virtually through various information technology devices such as cell phone as well as computers and their applications (Hamdani, et al., 2020).

Information Technology (*information technology*) itself, if defined, is a container, system, or method for obtaining, sending, processing, interpreting, storing, organizing, and using data meaningfully (Lamatenggo & Uno, 2016), which we can simply define as a tool for processing data. Related to this, in another sense, technology can support the educational process not only in teaching and learning practices but also in teaching preparation itself, one of which is related to the needs analysis design process (*need assessment*) for PAI learning.

Needs analysis (*need assessment*) needs to be done because, with this, an educator can find out what the needs of his students are and know the achievability of a goal. PAI learning aims to increase understanding of the Islamic religion, increase faith, and have faith moral *character*(Palahudin & Ruswandi, 2021). Meanwhile, the analysis itself means an investigation or an activity carried out to investigate the actual situation (Amin & Nurhadi, 2020). The needs are everything that is needed, especially to support learning.

So needs analysis is "*a need assessment is typically characterized as a disparity between an existing set of conditions and a desired set of conditions*" which means that needs analysis is a gap between what is expected and the conditions that occur (Holemboe, et al., 2020). In its implementation, there is a process to collect information about the gaps that occur, so a solution to the problem can be obtained. Therefore, needs analysis in PAI learning requires careful planning.

PAI learning is an effort made by educators to help students understand, interpret, and continue to study the Islamic religion itself (Alhaq et al., 2022). In determining PAI learning, a plan is needed to analyze learning needs. This aims to analyze various learning problems, develop a priority scale, and formulate learning objectives. To make it easier to prepare an analysis of student needs, educators can use the help of information technology. However, the question is how to implement it and whether PAI teachers have maximally used the currently available information technology to design learning needs analysis. And what are the challenges and opportunities in using information technology in designing PAI learning needs analysis?

Based on the results of interviews conducted with PAI teachers at SDN Cengal 2 on Thursday, 28 September 2023 in designing a needs analysis for PAI learning, it was indicated that teachers had not fully maximized the use of varied information technology due to several factors. One of the factors is the lack of knowledge and skills of teachers in operating information technology, as well as the lack of facilities provided by schools.

Therefore, this research aims to answer the problems that occur by offering alternative solutions. The alternative solution offered is to first provide an understanding of the use of information technology through activities such as *workshops* or webinars. Webinars can at least increase knowledge not only for PAI teachers but also as a whole. Apart from that, another solution is to communicate with school principals about the importance of using information technology in the current era.

The following is some previous research that is relevant to this research topic. First, research conducted by Budiman, et al (2022), this research aims to analyze the need for and application of media in learning Aqidah Akhlak. Second, Qamariyah & Nurhadi researched the importance of program needs analysis and IT-based educational training for PAI teachers. Third, research conducted by Mu'izzuddin (2022), his research focused on analyzing the need for LMS applications to support PAI learning in Central Java. Fourth, Budiyono's (2019), research aims to dig up information regarding the scope of technology used by PAI in the 4.0 era.

Based on existing research, there are similarities and differences with this research. The similarities lie in the topics discussed, namely needs analysis and the role of information technology. The difference lies in the subject of needs analysis, this research focuses on analyzing needs for learning while previous research focuses on analyzing needs for programs and learning media. Furthermore, another difference lies in the research location and school level. This research examines Elementary School (SD) while previous research examines Junior High School (SMP) and Senior High School (SMA) levels. This may result in the discovery of different research results.

For this reason, the researcher intends to explore in-depth information regarding the challenges faced by PAI teachers in involving technology in analyzing student needs through research with the title "Challenges of Using Information Technology in the Design Process of Needs Analysis for PAI Learning". The urgency of this research is to find out the extent of the use of information technology in the needs analysis design to support PAI learning in the schools studied.

RESEARCH METHODS

This research uses a qualitative approach with case study methods and research studies. Creswell (2014) defines the purpose of a qualitative approach as a research approach, namely by collecting and analyzing data that is not in the form of numbers, but in the form of phenomena that occur. Therefore, this research uses a qualitative approach because the focus of the research is on social phenomena, namely to explore information regarding the use of IT in designing analytical needs for PAI learning.

The research location is at SDN Cengal 2 which is located at Nunuk Baru village, subdistrict. Maja district. Majalengka. By interviewing one PAI teacher at the school. The population is class 5 with 26 students. The collection techniques use observation, interviews, and literature study. Data analysis techniques are by selecting the required data (*preparation),* then the data from the results of observations, interviews, and literature studies are categorized (organized) to make it easier to analyze the data after that interpret each result or explain the results of data collection regarding information from PAI teachers regarding the use of information technology in the analysis of PAI learning needs.

RESEARCH RESULTS AND DISCUSSION

Research result

Implementation of the Use of Information Technology in the Needs Analysis Design Process for PAI Learning

In implementing the use of information technology in the needs analysis design process for PAI learning based on the results of observations and interviews, the PAI teacher at SDN Cengal 2 explained that several processes must be taken, including

1. To identify problems experienced by students during learning, one way is by asking questions and answers with students or occasionally using paper containing questions with the help of a laptop regarding the learning that has been passed and what kind of learning is expected by students;

2. After that, data collection. Where answers from students are collected and then grouped and analyzed;

3. Then, group the answers. Some answered that it was difficult as expected, while others wanted the learning to be more interesting. This is useful for finding out what students' needs are in learning and knowing whether there are gaps or not;

4. Then, after it was discovered that there was a gap between students' expectations and reality. This becomes material for evaluation and as an improvement for teachers. Therefore, PAI teachers prepare detailed learning objectives that address the needs of students but still look at the curriculum.

Based on this explanation, the use of technology implemented by PAI teachers as support for the process of analyzing student needs is using the help of laptops which are part of the hardware. In an era like today, teachers should take advantage of the presence of technology to support learning.

Factors that cause PAI teachers to still not maximize the use of information technology in the needs analysis design process for PAI learning

PAI teachers' ability to use information technology for the needs analysis design process in learning is needed. By using information technology, teachers can analyze and then adapt it to students' needs in the learning process, as well as obtain various other information. However, there are still many PAI teachers who have not maximized the use of information technology, especially in the process of analyzing learning needs.

Based on the results of interviews with PAI teachers at SDN Cengal 2 on Thursday, September 28, 2023, the factors that cause PAI teachers to be indicated as not maximizing the use of various information technologies in the needs analysis design process for PAI learning are:

1. PAI teachers' lack of knowledge in operating information technology. This results in meeting the needs for PAI learning, where the PAI learning expected by students at the school is more varied.

2. Not yet fully skilled in using information technology in the needs analysis design process for PAI learning.

3. The age is no longer young. This is also a factor why PAI teachers at SDN Cengal 2 have not optimized the use of information technology. However, he still tried and tried to keep learning.

Thus, the things above are a factor in the fact that there are still many PAI teachers who do not use information technology in the needs analysis design process for PAI learning, one of which is the lack of knowledge and skills which have an impact on the learning needs analysis design process.

Challenges and Opportunities for Using Information Technology in the Needs Analysis Design Process for PAI Learning

In using information technology, of course, there are challenges as well as opportunities. Based on the results of the interview, the challenge is the lack of self-confidence of teachers in using information technology. This is caused by fear of failure during the teaching and learning process, fear of not being able to operate, and so on. Apart from that, there is a lack of adequate facilities and infrastructure.

However, there are also opportunities for the use of information technology at SDN Cengal 2. This opportunity is that the school is very open to suggestions given by other parties for the progress of the school. Therefore, the results of this research will be used as material for schools to consider in optimizing the use of information technology.

Discussion

Implementation of the Use of Information Technology in the Needs Analysis Design Process for PAI Learning

The implementation of the use of information technology in the PAI learning needs analysis design process carried out by PAI teachers at SDN Cengal 2, based on the results of observations in the field, is quite good, but still not optimal. This can be seen from the way teachers collect information to fulfill analytical needs in learning, PAI teachers only use typewriters but do not maximize other information technology.

Teachers should always utilize technology to help analyze student needs and help convey learning material. The use of technology in learning is very necessary to help teachers complete their duties as teachers (Abdul Mun'im Amaly et al., 2021). In an era like today, technology is needed in the teaching and learning process to make it more effective and efficient (Salmah et al, 2022). Apart from that, this will have an impact on student learning outcomes because it is considered less interesting (Fauzan & Fikri, 2022). Therefore, the use of technology is necessary and always utilized in preparing steps for analyzing student needs. The steps in designing a learning needs analysis include: collecting information, identifying the gaps faced, and performance, identifying the obstacles that arise, identifying the characteristics of the students, identifying the priorities and goals to be achieved, and finally formulating the problem (Suryadi, 2022).

Teachers should pay attention to each step in a process, especially in analyzing student needs (Nursyamsiyah et al., 2021). By paying attention to these steps, it is possible to achieve a goal. So, needs analysis is very necessary. In analyzing the need for PAI learning, PAI teachers have taken good steps even though several things are still lacking. In general, the steps in analyzing learning

needs are planning, collecting data, analyzing data, and creating a report that will be used as an evaluation (Amin & Nurhadi, 2020). The model used by PAI teachers in the learning analysis process is the inductive method, which begins with analyzing the problems experienced by students in their learning and ends with evaluation.

Factors that cause PAI teachers to still not maximize the use of information technology in the needs analysis design process for PAI learning

Factors causing PAI teachers to still not maximize the use of information technology based on interviews include a lack of ability to use information technology. This causes teachers to have comfort in using minimal technology and simple techniques. Teachers are comfortable using needs analysis techniques that are simple and easy to carry out so that there is not too much information technology involvement (Yusrizal et al., 2017). This will have an impact on achieving goals in learning (Rahim et al., 2019).

The other factors are lack of knowledge and age. The age factor is a factor in a person's lack of maximizing the use of technology (Hasyim et al., 2022). Therefore, it is necessary to hold training or workshops that support the use of information technology. In most schools in remote areas, training or training is rarely held in a workshop regarding the use of information technology, especially in the process of analyzing PAI learning needs, which causes a lack of knowledge regarding this matter (Rachmawati & Rudiyansyah, 2020). Based on the results of the researcher's analysis, a lack of knowledge will indeed have an impact on a person's abilities. Therefore, there is a need for supporting activities to solve the problems that occur.

Thus, there are still several reasons why the use of information technology is less than optimal in the PAI learning needs analysis design process and requires alternative solutions.

Challenges and Opportunities for Using Information Technology in the Needs Analysis Design Process for PAI Learning

In using information technology for the design process of analyzing student needs, of course, it is not free from challenges. The challenge is the lack of potential. However, the challenges faced by several teachers regarding the lack of potential are a positive thing, because with this, the school and teachers always continue to try and strive to increase the potential they have (Fajriana & Aliyah, 2019). Apart from that, another challenge is the view that when using various technologies there is a fear of failure. Due to the lack of skills possessed by teachers, this causes failure in operating technology (Sukma Baihaki, 2020). The next challenge is the lack of support for facilities and infrastructure in schools (Noer, 2023). Lack of skills, fear of failure, and lack of supporting facilities create

challenges in using information technology, as a result, teachers only use minimal technology (Sawitri, 2019). However, with this in mind, the school continues to act for criticism and suggestions for the improvement of the school.

CONCLUSIONS AND IMPLICATIONS
The Knot
In conclusion, the challenges in using information technology at SDN Cengal II are the lack of skills or potential possessed by PAI teachers, fear of trying, and lack of supporting facilities and infrastructure. However, the use of information technology at SDN Cengal 2 is quite good, but it is still indicated that it is not optimal due to several factors. Therefore, there is a need for cooperation between schools in increasing the use of information technology, especially in analyzing learning needs. But so far, the school has put a lot of effort and effort into improving the skills of the pursuers at the school.

Implications
The results of this research have an impact on understanding, especially for schools, of the importance of using information technology, so that in the future schools will strive to provide understanding through workshop which is planned to be implemented soon.

REFERENCE
Abdul Mun'im Amaly, Muhammad, G., Erihadiana, M., & Zaqiah, Q. Y. (2021). Islamic Religious Education Teacher Skills in Optimizing Technology-Based Learning. Journal of Islamic Religious Education Al-Thariqah, 6(1), 88–104. https://doi.org/10.25299/al-thariqah.2021.vol6(1).6712

Alhaq, M., Nugraha, M. A., & Oding, O. (2022). Effectiveness of Cooperative Learning Model and Direct Instruction for Student Learning Achievement. Journal of Islamic Religious Education Innovation (JIPAI), 2(2), 133–145. https://doi.org/10.15575/jipai.v2i2.18743

Amin & Nurhadi (2022). Islamic Management: Journal of Islamic Education Management. https://doi.org/10.30868/im.v3i02.871

Ariyantika, D. (2019). Development of Pocket Book of Mathematics Media for Children with Special Needs (ABK) to Facilitate the Ability to Understand Mathematical Concepts for SLB Students (Doctoral dissertation, UIN Raden Intan Lampung). Link http://repository.radenintan.ac.id/6912/1/SKRIPSI.pdf

Budiman, R. D. A., Liwayanti, U., & Arpan, M. (2022). Analysis of Needs and Readiness for Implementing Android-based Learning Media for Creed Science Material. Edumatic: Journal of Informatics Education, 6(1), 31-38. DOI: https://doi.org.10.29408/edumatic.v6i1.5087

Fajriana, A. W., & Aliyah, M. A. (2019). Teacher Challenges in Improving the Quality of Islamic Religious Education in the Millennial Era. Nazhruna: Journal of Islamic Education, 2(2), 246–265. https://doi.org/10.31538/nzh.v2i2.324

Fauzan, F. A., & Fikri, M. (2022). The Creativity of Islamic Religious Education Teachers for Effective Learning. Journal of Islamic Religious Education Innovation (JIPAI) Volume, 2(2). DOI: https://doi.org/10.15575/jipai.v2i2.18196

Handayani, Febriyanto, I. E and Kristanti, C. Y, (2019), 'The Role of Information and Communication Technology Developments in Ilearning Plus Learning at Raharja University', Journal of Technology and Vocational Education, 16.2, p.182 https://doi .org/10.23887/jptk-undiksha.v16i2.17859

Hasyim, I., Warsah, I., & Istan, M. (2022). Competence of Islamic Religious Education Teachers in Using Technology for Online Learning During the Covid-19 Pandemic. Journal of Education and Instruction (JOEAI), 4(2), 623–632. https://doi.org/10.31539/joeai.v4i2.3212

Holmboe, E. S., Iobst, W. F., & Accreditation Council for Graduate Medical Education. (2020). Assessment guidebook. Chicago: Accreditation Council for Graduate and Medical Education. Link https://www.acgme.org/globalassets/PDFs/Milestones/Guidebooks/AssessmentGuidebook.pdf

Lamatenggo, N., & Uno, H. B. (2016). Learning communication & information technology. Literary Earth. Link http://books.google.co.id/books?id=gLqdAQAACAAJ&dq=intitle:Communication+Learning&hl=&source=gbs_api

Mu'izzuddin, M. (2022). Analysis of Learning Management System Application Needs for Islamic Religious Education Subjects in Schools in Central Java. Edutrained Journal: Journal of Education and Training, 6(1), 63-73. DOI: https://doi.org/10.37730/edutrained.v6i1.158

Mustamila, N. (2021). Analysis of the Use of Information Technology in the Physics Learning Process of Ma'arif Vocational School in Sukoharjo District During the Covid-19 Pandemic. Physics and Science Education Journal (PSEJ), 126-132. https://doi.org/10.30631/psej.v1i3.992

Noer, S., & S. A. P, R. S. (2023). Government Policy in Improving the Quality of Islamic Religious Education Teachers; Systematic Analysis of Literature Review. Tarbawi Ngabar: Journal of Education, 4(2), 165–195. https://doi.org/10.55380/tarbawi.v4i2.520

Nursyamsiyah, S., Habibullah, A., & Aminullah, A. (2021). Analysis of the Capabilities of Islamic Religious Education Teachers in Preparing Learning Implementation Plans (RPP) for the 2013 Curriculum. In Science and Technology Research Journal (Vol. 6, Issue 1).

Nuryana, Z. (2019). Utilization of Information Technology in Islamic Religious Education. Tamaddun, 19(1), 75-86. http://dx.doi.org/10.30587/tamaddun.v0i0.818

Meliani, et al., (2022) Pai Learning Innovation Based Online with the Assure Model Pai Learning Innovation Based Online with the Assure Model. DOI: https://doi.org/10.15575/jipai.v1i1.10962

Qamariyah, N., & Nurhadi, A. (2021). The Importance of Needs Analysis in IT-based Education and Training Programs for PAI Teachers in the Midst of the Covid'19 Pandemic. Indonesian Journal of Islamic Educational Management, 4(1), 7-15. DOI: http://dx.doi.org/10.24014/ijiem.v4i1.11647

Rachmawati, A., & Rusydiyah, E. F. (2020). Implementation of e-learning based learning in Islamic religious education subjects. Indonesian Islamic Education Journal, 5(1), 1-14. Doi: https://doi.org/10.35316/jpii.v5i1.223

Rahim, F. R., Suherman, D. S., & Murtiani, M. (2019). Analysis of Teacher Competence in Preparing Information Technology-Based Learning Media in the Era of Industrial Revolution 4.0. Journal of Exact Education (Jep), 3(2), 133-141. https://jurnal.umj.ac.id/index.php/SAMASTA/article/view/6692

Rizal, S. (2019). Analysis of Needs for English Language Teaching Materials in Iain Bengkulu Through Students' Need Analysis. At-Ta'lim: Islamic Education Information Media, 12(2), 232-252. DOI: http://dx.doi.org/10.29300/attalim.v12i2.1632

Salmah, S., Affan, S., & Fuadi, A. (2022). Analysis of the Benefits of Technology and Information in Supporting the Advancement of Digital-Based Islamic Religious Education at MTs Nurul Islam Dusun IX Suka Maju Village Tanjung Pura. Edu Society: Journal of Education, Social Sciences and Community Service, 2(1), 512-527. DOI: https://doi.org/10.56832/edu.v2i1.189

Sawitri, E., Astiti, M. S., & Fitriani, Y. (2019, July). Obstacles and challenges of learning based on information and communication technology. In Proceedings of the National Seminar of the Postgraduate Program of the Pgri University of Palembang. https://jurnal.univpgripalembang.ac.id/index.php/Prosidingpps/article/view/3026

Sukma Baihaki, E. (2020). Islam in Responding to the Digital Era: Challenges of Maintaining Communication between Religious Communities in Indonesia. Journal of Socio-Religious Studies, 3(2), 185–208. https://doi.org/10.20414/sangkep.v2i2

Suryadi, A. (2022). Learning Design: An Introduction. CV Trace (Publisher Trace).

Yusrizal, Y., Safiah, I., & Nurhaidah, N. (2017). Teacher Competence in Utilizing Learning Media Based on Information and Communication Technology

(Tik) at Sd Negeri 16 Banda Aceh. Student Scientific Journal of Elementary School Teacher Education, 2(4).