

## Evaluation and Assessment Innovation Challenges and Opportunities in PAI Learning: Building a Competitive Generation (Students) in the 21st Century

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**Abstract:** This study aims to discuss innovations in evaluation and assessment in Islamic Religious Education (PAI) learning in order to face challenges and take advantage of opportunities to build a competitive generation in the 21st century. The method in this study is a qualitative method of literature study taken from several journals, articles or internet ebooks. The result of this discussion is that in the era of globalization full of technological advances and social changes, the traditional evaluation system in PAI learning is considered less able to accommodate the development of 21st century competencies, such as critical thinking, creativity, collaboration, and digital literacy. Through evaluation innovations, such as the use of digital technology and assessment methods that focus on continuous learning, this article examines how educators can prepare students with relevant skills to compete in a global world. Innovation in evaluation in PAI is needed to improve student competence in the digital era. The use of technology and continuous learning methods can be a solution to global challenges, with opportunities for optimization through collaboration and technology utilization.

**Keywords:** Innovation Evaluation and Assessment; Challenge Opportunities; PAI.

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**Abstrak:** Penelitian ini bertujuan membahas inovasi dalam evaluasi dan assessment pada pembelajaran Pendidikan Agama Islam (PAI) dalam rangka menghadapi tantangan dan memanfaatkan peluang untuk membangun generasi yang berdaya saing di abad 21. Metode dalam penelitian ini adalah metode kualitatif studi kepustakaan yang diambil dari beberapa jurnal, artikel atau ebook internet. Hasil dari pembahasan ini adalah bahwa pada era globalisasi yang penuh dengan kemajuan teknologi dan perubahan sosial, sistem evaluasi tradisional dalam pembelajaran PAI dinilai kurang

mampu mengakomodasi perkembangan kompetensi abad 21, seperti berpikir kritis, kreativitas, kolaborasi, dan literasi digital. Melalui inovasi evaluasi, seperti penggunaan teknologi digital dan metode assessment yang berfokus pada pembelajaran berkelanjutan, artikel ini mengkaji bagaimana pendidik dapat menyiapkan siswa dengan keterampilan yang relevan untuk berkompetisi di dunia global. Inovasi evaluasi dalam PAI diperlukan untuk meningkatkan kompetensi siswa di era digital. Pemanfaatan teknologi dan metode pembelajaran berkelanjutan dapat menjadi solusi menghadapi tantangan global, dengan peluang optimalisasi melalui kolaborasi dan pemanfaatan teknologi.

**Kata Kunci:** Inovasi Evaluasi dan Assesment; Peluang Tantangan; PAI.

## **A. Introduction**

Education is an important part of the country's development and faces major challenges in terms of improving quality and expanding learning opportunities. In this digital era, educational technology is one of the strategic ways to answer these challenges (Mufidah, 2022). In the context of Islamic religious education, the use of technology provides a great opportunity to increase the effectiveness and interactivity of the learning process. The use of digital platforms, mobile applications, and online learning can facilitate students' access to more interesting and interactive teaching materials. Digital learning media such as simulations, animations, and learning videos have been proven to be able to increase student learning motivation (Syafa & Mukhrij Sidqy, 2024).

In Islamic religious education, learning evaluation has an important role in measuring the achievement of educational goals. This evaluation is designed to assess the level of understanding and skills of students after receiving guidance from teachers. The evaluation method of religious education aims to assess student behavior based on competency standards that include psychological, moral, and spiritual aspects. Islamic education is not only oriented towards the formation of religious personality, but also encourages students to have extensive knowledge and the ability to

practice good values in daily life (Heryati et al., 2023).

Assessment in Islamic religious education includes comprehensive psychological, mental, and spiritual aspects. This evaluation process not only measures students' academic abilities, but also the development of their personalities and religious attitudes. The main goal of this evaluation is to form a generation that has a balance between religious knowledge and social skills that are relevant to the needs of modern society (Nursyamsiyah, 2023).

One of the modern evaluation approaches is assessment, which is the process of collecting information to analyze and assess student performance in various academic tasks. Assessment is used to measure the extent to which students master the subject matter and their ability to apply that knowledge in real life. By using innovative assessment methods, the learning objectives formulated in the Learning Implementation Plan (RPP) can be achieved more effectively (Achmad & Prastowo, 2022)

The development of information technology in the 21st century has had a great impact on various aspects of life, including in the world of education. Technological advancements have automated many processes and changed the way humans acquire and disseminate information. Information can now be accessed quickly through a variety of digital devices, from computers to smartphones. This requires the younger generation to have good digital literacy skills in order to compete in an increasingly complex global era (Hadi, 2020).

Islamic education in the 21st century faces great challenges as well as promising opportunities. On the one hand, digital technology provides easy access to learning resources and allows innovation in learning methods. Technology can be used to convey religious values through more visual and engaging media, such as animation and interactive videos. However, on the other hand, the rapid development of technology also carries the risk of spreading content that is not in accordance with Islamic teachings. Therefore, Islamic education must be able to filter and verify digital information in order to remain in accordance with true religious values (Sirojudin et al., 2023).

The integration of science and religious values is one of the important solutions in

facing the challenges of the digital era. By combining the two, Islamic education can prevent the occurrence of dualism between religious values and rational knowledge. This integration aims to create a curriculum that combines academic competence with a strong moral foundation. Islamic education is expected to be able to produce a generation that is not only intellectually intelligent, but also has a moral character and noble character. In this context, the integration of science and religion is the core of the mission of Islamic education to create a balanced, harmonious society, and contribute positively to the progress of the nation (Suwito et al., 2024).

Like the previous research conducted by Hasmawati in her research entitled "Assessment in the Independent Curriculum Perspective of Islamic Religious Education". As'adiyah Sengkang Islamic Religious Institute. In the Independent Curriculum, assessment has a crucial role in supporting the smooth learning process. Assessments are carried out by teachers or educators to identify students' talents and interests, so that learning can be tailored to their needs. This assessment consists of two types, namely cognitive diagnostic assessment and non-cognitive diagnostic assessment. In addition, assessments are also carried out in two stages, namely formative assessments that are carried out at the beginning and during the learning process, and summative assessments that are carried out at the end of learning or at the end of the semester. Islamic Religious Education is closely related to the Independent Learning approach, where various studies show that the application of assessments in the Independent Curriculum can strengthen the relevance of Islamic Religious Education in a more flexible and student-centered learning context (Susanto, 2023).

The difference with the research to be carried out, where the research examines how the assessment process is carried out to measure students' understanding of religious values and spirituality in accordance with the Pancasila student profile. The main focus of this study is to examine the types of assessments used in PAI learning, such as formative, summative, and project-based assessments, as well as identify the challenges faced by PAI teachers in implementing effective assessments. The approach used in this study is qualitative with a field study method in Islamic-based schools that

have implemented the Independent Curriculum. This study aims to provide an overview of how PAI assessment can contribute to the formation of student character in accordance with Islamic values.

The similarity is in the application of assessment and evaluation in Islamic Religious Education (PAI) learning. Both aim to improve the quality of assessments that not only assess cognitive aspects, but also affective and spiritual aspects of students, thus producing a generation of character and competence. These two studies also discuss the importance of assessment in forming students who have strong religious values, as well as being able to adapt to challenges in the era of globalization.

The other research was conducted by Yusron Al Fajri, Mohammad Sahlan with the research title "Evaluation of Learning Based on Information And Communication Technology (ICT) in PAI Subjects". UIN KHAS Jember, Indonesia. This research was conducted with the aim that computer-based information technology is used as a means to convey and process information by utilizing microprocessors. In the context of learning evaluation, the application of ICT-based evaluation in Islamic Religious Education (PAI) subjects at the high school level is carried out using the Computer Based Test (CBT) model. CBT is a form of implementation of Information and Communication Technology (ICT) in education. This ICT-based evaluation no longer requires the use of paper, because the test can be done directly through a computer, and the scoring system is done automatically by software. The presence of ICT-based evaluation in PAI subjects provides convenience for educators in the assessment process and supports the progress of the world of education in line with the development of technology and information (Fajri & Sahlan, 2023).

The difference between the previous research and the one to be studied is how the use of information and communication technology (ICT) can be integrated into the learning evaluation process of Islamic Religious Education (PAI). This study examines the application of various digital devices and ICT-based platforms to increase the effectiveness of evaluation in PAI, such as the use of online exam applications, learning management systems (LMS), and other digital media. The main focus of this study is to analyze the extent to which the use of ICT can facilitate the process of assessing student

learning outcomes in PAI subjects and how technology can support teachers in compiling evaluations that are more accurate, efficient, and relevant to the needs of students in the digital era. The approach used in this study tends to be technical, with an emphasis on the use of digital tools and platforms in the PAI evaluation process.

The similarity between the previous research and the research to be carried out is to both examine the challenges and opportunities in the application of evaluation and assessment in PAI. Both are trying to find solutions to overcome the limitations of traditional evaluation and replace them with more innovative methods that suit the needs of students in the digital era. In addition, both also focus on developing a generation that has 21st century competencies and skills, such as critical, creative, and collaborative thinking, which are essential to face global challenges. In this case, both studies aim to create an evaluation system that not only measures knowledge, but also shapes students' character and abilities in the context of the development of the times.

The research was conducted by Juhaeni, with the title "The Concept of Project-Based Evaluation Development in Islamic Religious Education Learning". Sunan Ampel State Islamic University, Surabaya, Indonesia. The results of this study show that project-based evaluation not only aims to measure students' understanding of Islamic religious teachings, but also involves them in practical activities that allow the application of these concepts in daily life. By designing projects that are relevant to the context of students' lives, these evaluations assess not only cognitive aspects, but also worship practices, ethical values, and morality. The project-based evaluation approach offers a holistic assessment method by assessing the understanding and application of Islamic religious values in real activities. Thus, this method can improve the quality of PAI learning and form students who have a strong commitment to Islamic teachings (Juhaeni et al., 2024).

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The similarity between the previous research and the research that will be carried out is to develop evaluation and assessment in Islamic Religious Education (PAI) learning that is more innovative and relevant to the times. Changing traditional evaluation methods to be more dynamic and holistic, with the aim of improving the quality of PAI learning and shaping a generation of students who have the skills needed in the 21st century. An orientation on developing students' skills that go beyond cognitive knowledge, but also includes affective aspects and social skills such as critical thinking, creativity, and teamwork skills. Creating evaluations that not only measure academic learning outcomes, but also shape broader character and competencies in students. Identify challenges and opportunities in the application of more modern and innovative evaluation methods in PAI, be it through projects or other evaluation innovations, to ensure that these evaluations can prepare students to face global challenges and become competitive individuals in the future.

Some of these studies have the same orientation in dealing with existing technological developments. The difference between research and previous research, with what the researcher researches is in terms of the object being researched, where the researcher raises the object because the researcher here focuses more on the assessment of Evaluation and Assessment in Islamic religious education learning which aims to build a competitive generation in the 21st century. The Problem Formulation in this study is 3 of them: How can the application of innovation in the evaluation and assessment of Islamic Religious Education (PAI) learning develop 21st century skills in students?. What are the main challenges faced in implementing innovative evaluation and assessment in PAI learning in the 21st century? What are the opportunities that can be optimized in PAI learning through innovation in evaluation and assessment to build a



competitive generation? Meanwhile, the goal is to find out what opportunities can be optimized in PAI learning through innovation in evaluation and assessment to build a competitive generation. To find out the main challenges faced in the implementation of innovative evaluation and assessment in PAI learning in the 21st century. To find out opportunities that can be optimized in PAI learning through innovation in evaluation and assessment to build a competitive generation.

## **B. Metode Penelitian**

This research is a type of qualitative research method using the library research method. This literature method uses sources from scientific information, while some of the sources used include; manuscripts of relevant textbooks, journals. As for the period that needs to be passed in literature studies. First, collect empirical materials or information sourced from books, journals, which are supportive. Second, read the material and explore information that approximately has ideas that are related to the research. Third, make a note about the research. The four records are managed and re-examined to make a conclusion.

## **C. Results and Discussion**

### **1. Innovation in PAI evaluation and assessment**

Innovation is an idea (idea), practice, or object that can be considered as something new or adopted from something that already exists by changing it. Learning innovation is the result of reflection on the old paradigm and transition to a new perspective, which is considered to be able to solve problems and improve teaching methods. Among the problems related to higher education are the tendency to learn based on ideas and facts rather than for the needs and solutions to problems using subject matter, communication can only be done in one direction, static media, and more normative assessments (Erlina, 2020).

The purpose of innovation is to solve problems, improve certain processes, or problems that occur in society. For example, in the academic field, innovation models have been launched in many fields, including efforts to differentiate education, improve the quality of education, produce better outcomes and educational efficiency, and



learning harmony. This is all done with the aim that innovation can be disseminated and used to improve and solve national education problems. There are many models of innovation including online education programs, School-based management, repetitive teaching, structural education, active, innovative, efficient, and exciting education. Several efforts have been made to modernize education and create innovation. These innovations include education administration, teaching methodologies, media, learning resources, teacher training, and curriculum implementation (Dinn Wahyudin, 2020).

Education not only produces innovations in the form of new media and learning tools; curricula, models, teaching materials, strategies, and educational organizations are also changing. Leadership, management, and educational organizations are also changing. even innovations in learning through the internet. The author emphasizes once again that innovation is not only related to machines, robots, and other advanced applications. Innovation can also come from unused materials or from simple ideas that are often overlooked. In short, innovation is anything that can help teachers and students improve their performance in learning (Sutikno, 2021).

The process of continuously collecting and explaining information to assess (evaluate) decisions made regarding the design of learning systems is known as learning evaluation. On the other hand, evaluation in a broad sense is a process in planning, obtaining, and providing information that is indispensable for making various decision choices. In accordance with this understanding. Each evaluation activity has the following three consequences. First, evaluation must be carried out throughout the lesson, not only at the end of the lesson, and must start from the beginning of the lesson. Second, the assessment needs to be set on a specific goal, namely to find several solutions to optimize education. Third, the evaluation must collect the information needed to make decisions through the use of appropriate and relevant measuring tools (Rina Febriana, 2021).

The goal is that a teacher can achieve the goal of a specific evaluation in two ways. First, they can explain the scope of evaluation by referring to the breadth of knowledge of the subject and second, they can explain the mental processes to be

evaluated by referring to the level of knowledge. Teachers must be aware of the various abilities of students. First, knowledge of learners' basic abilities and progress can be used to design their future achievements. Second, the knowledge collected about students' basic abilities and progress can be used to design their educational programs (Raharjo, 2022).

In addition to the learning process in the classroom, evaluation is an essential component that is important to be done appropriately. This is because from the assessment, teachers can obtain valid information about their students' abilities, which will be used by teachers to make decisions about learning. In addition, assessments can also be used by teachers as a representation in their teaching quality assurance and their classroom administration. During the classroom administration process, teachers must try various ways to make lessons interesting. Learning will be boring for students if teachers do not support and want to innovate in learning (Miftha Huljannah, 2021).

There are two types of assessment in education, namely assessment in the sense of assessment and assessment in the sense of evaluation. Assessment in the sense of evaluation is an activity intended to measure the effectiveness of the education system as a whole. Evaluation based on the concept of assessment is an activity intended to collect details about students' achievements and their progress in learning (Supriyadi, 2021).

Formative, summative, diagnostic, and authentic evaluations are some of the types of evaluation and assessment. Formative evaluations are conducted during the learning process to track and improve student learning, such as through short quizzes and class discussions. Summative evaluations are carried out at the end of the learning period to assess how well students are learning. Before learning begins, a diagnostic evaluation is carried out to determine the student's knowledge and learning needs, using a prerequisite test. Authentic assessments assess students' abilities through real tasks, such as research projects. Written tests, observations, portfolios, and interviews are assessment methods. Written exams can be essays or multiple choice, and observation involves anecdotal notes and assessment rubrics. Portfolios collect self-reflection and student work. Interviews can be conducted in groups or individually (Abdurahman et al., 2024).

The terms measurement, exam or test, evaluation, and assessment are still often mixed in learning assessment activities. Because this assessment activity focuses on one point, the overlapping use of this term can be understood, namely the process of assessing students' academic abilities. These four terms differ significantly. It is clear that the term "measure" in the field of education cannot be confused with the term "measure" in parts other than in the field of education, the term "measurement" refers to the actions of teachers that involve giving labels or signs in the form of unit numbers (Nur Budiono & Hatip, 2023).

Evaluation, or assessment, is an essential component to achieving the goals of 21st century learning. The quality of assessment can indicate the quality of learning, and vice versa. Educators must have the ability to create an assessment system that lasts all the time. This means that evaluations begin at the beginning, middle, and end of class. Assessments can be carried out based on performance and products created by students, among students as feedback, or based on categories that have been prepared by educators (Rosnaeni, 2021).

The purpose of Islamic religious education is to realize kamil people who have perfect faith, morals, and deeds, so that there is unity between body and spirit, the world and the hereafter. In other words, education about Islam must address three aspects: the heart (heart) or affective, the intellect (head) or cognitive, and the hand (physical) or psychomotor. All three must run simultaneously, integratively, and comprehensively. Therefore, the curriculum that is considered ideal to achieve the goals of PAI is one that is integrated and comprehensive, covering the knowledge needed both in this world and in the hereafter (Nur & Jassin, 2022).

Innovation in education is essential to produce significant changes in educational institutions because the goal of innovation is to solve educational problems and produce students who can compete with the times. innovative related to evaluation, which actually aims to find out how well students understand the material taught by the teacher (Achadah, 2021).

One way teachers can maximize the learning process is by building innovative teaching skills. Teaching is a complex process. In addition to providing students with

material from books, teaching them how to think and learn from books. If a PAI educator does not have basic teaching skills, the teaching and learning process will become more tedious. Teachers must make new innovations to make education fun. They must create a new learning process to help their students learn and use technology well. This is a very important method for teachers to improve the quality of learning as well as improve teacher competence (Rafliyanto & Mukhlis, 2023).

Evaluation and assessment are interrelated with student learning achievement. Assessment is used in a narrower sense, whereas evaluation is used in a broader sense. Assessment in learning aims to evaluate students' abilities in learning achievement in the independent learning curriculum. In PAI subjects, for example, assessments in the form of essays and memorization aim to improve students' competence in critical thinking, understanding, answering, and memorizing the material given by subject teachers. To improve students' abilities in PTM or outside the classroom in accordance with the free learning curriculum, essay analysis and PAI memorization are provided. In primary and secondary education, summative assessments are carried out to assess the achievement of learning objectives and/or learning outcomes (CP) of students. This is used as a basis for determining grade promotion and/or graduation from the educational unit. This assessment is carried out by comparing student learning outcomes with the criteria for achieving learning objectives (Masitho et al., 2023).

## **2. The main challenges faced in the implementation of innovative evaluation and assessment in PAI learning in the 21st century**

The factors of global challenges and increasingly fierce competition cause education to increase national competitiveness in producing high-quality creative works and various other constructive thoughts. In addition, education must produce people who are able to prevent new attacks and colonialism in different regions. To produce competitive and high-quality graduates, as well as increase added value in increasing graduate productivity, educational institutions must conduct extensive research on various topics around the world. Because education has become a reality, which will show that education still exists (Bassar et al., 2021).

The problems faced in teaching PAI in the era of globalization are an interesting topic that needs to be researched. Whether Indonesian PAI teachers can overcome this problem in the era of globalization is a questionable question. To address this issue, research must be conducted. The focus of this research is to determine whether Islamic education has the ability to adapt to the era of globalization and offer protection for the nation's children from current challenges (Fitriani, 2023).

Changing the "look" of the Islamic education paradigm in the global and millennial era is important. Islamic education must immediately undergo changes and prepare students to participate in this millennial era. One of the objectives of this participation and action is to protect Muslims from the various consequences caused by the millennial phenomenon. In addition, the millennial generation with Muslim education has many opportunities. Basically, this opportunity can give the world of Islamic education the opportunity to show its Islamic values as an advantage in the midst of civilization. In addition to bringing opportunities, the millennial generation also brings challenges to the world of Islamic education. They need to find a solid foundation to evaluate the goodness of Islamic education and evaluate the various shortcomings or weaknesses that have occurred to date (Aryanti, 2022).

Islamic education has an opportunity or opportunity to distribute knowledge through the educational process that must be used for everyone, including the current generation. Because Islamic education is the act of providing Islamic knowledge and principles to students using education to achieve happiness in this world and the hereafter. However, Islamic education must be provided to the community with a method that is easily accepted and understood in accordance with the development of the times. so that Islamic education can be carried out effectively and in accordance with the objectives, namely to increase knowledge theoretically, practically, and functionally, as well as to enhance creativity, talent, and human nature, and to build a high-quality generation that is in accordance with Islamic principles and able to pass on these values to the next generation (Johan et al., 2024).

On the other hand, in the age of computers and the internet, there are many opportunities for Islamic religious education. Digital platforms allow people in different

regions, including those who are difficult to reach physically, to gain access to education. This paves the way for spreading Islamic religious knowledge more effectively to the wider community. In addition, digital technology opens up great opportunities for Islamic religious education. The use of audiovisual media, simulations, and educational games can make religious learning more interactive and interesting for students. Digital technology can pique students' interest and improve their understanding of religious teachings. They can also expand the reach of Islamic boarding schools and other educational institutions. Pesantren can use digital platforms to adopt a distance learning (online) or blended learning model, which allows students to learn from anywhere. This can help Islamic boarding schools remain relevant and competitive in providing quality Islamic religious education (Sirojudin et al., 2023).

To increase the effectiveness of Islamic religious education, the training and professional development of educators is also very important. To be an effective facilitator in the learning process and inspire students to reach their maximum potential in understanding and practicing the teachings of Islam, teachers must constantly update their pedagogical skills. Overall, to increase the effectiveness of Islamic religious education through the implementation of a competitive curriculum, a holistic approach is needed. This approach involves the development of relevant curriculums, the application of innovative learning methods, the integration of technology, and the professional development of teachers. By taking these steps, Islamic religious education can become more relevant, interesting, and beneficial for students in facing the challenges of modern times (Anis Zohriah<sup>1</sup>, Hikmatul Fauzjiah<sup>2</sup>, Adnan<sup>3</sup>, 2023)

In the 21st century, learning evaluation is emphasized on authentic assessment, which starts from students' interests and direct experiences. This learning method encourages students to actively participate in actual learning activities, encourages them to conduct research, and helps them understand their surroundings. The Independent Curriculum emphasizes better learning outcomes that are tailored to the individual needs of students. This method is carried out using diagnostic assessments and non-cognitive diagnostic assessments. This assessment evaluates students' initial understanding and abilities in one area of study before the learning process begins. The goal is to help

educators make better teaching approaches and better understand the abilities of individual students (Sari et al., 2024).

One of the most common problems in the field is that teachers do not understand 21st century skills and are less skilled in creating evaluation instruments that match those skills. This is ineffective and results in student learning that is contrary to the curriculum design used. Assessing learning activities and learning outcomes is the responsibility of teachers. However, in most cases, teachers concentrate on assessing learning activities, and evaluation of learning outcomes is often ignored or underpaid. Today, there are many competency-based assessment tools that teachers can use to assess and grade their students. The use of competency-based assessment tools is also expected to make the test more comfortable for students (Nengsih et al., 2022).

In the present fourth century of the industrial revolution 4.0, or the "Education Era 4.0". One of the threats from this "Education Era 4.0" is that teachers must be the driving force in advancing Indonesia and producing a superior generation in the future. The Minister of Education and Culture, for example, stated that teachers must be the driving force in advancing Indonesia. The emergence of the Industrial Revolution 4.0 is not over and along with that the emergence of the Social Era 5.0. Technology has become a part of some people's lives, but the diminishing presence of technology can reduce human imbalances and cause new problems. Community 5.0 is the life of a human society that relies on technology to solve problems and threats. It uses innovations from the Industrial Revolution 4.0, such as using the internet in everything, transforming intelligence, generating large volumes of data, and designing machines to improve the quality of human life. As educators in the 5.0 era, teachers must have digital skills and creative thinking. Educators must be able to create creative and dynamic learning (Halimah, 2021).

### **3. Opportunities that can be optimized in PAI learning through innovation in evaluation and assessment to build a competitive generation**

Currently, the progress of educational institutions depends on public perception. Therefore, leaders and educational institutions must create strategies to create an environment that is constantly changing and responsive to the needs of the



surrounding communities Social change, technological advancements, diverse societal demands, and financial pressures can be the cause of this complexity. Education providers must face great challenges as the number of educational institutions increases Therefore, managers of educational institutions must continue to think critically and innovate to maintain their excellence, keep up with the demands of the times, and provide satisfaction to students. Important factors that can increase the competitiveness of education and improve its quality include good leadership, innovation in learning, qualified teachers, and good facilities (Nurlina et al., 2023).

Teachers play a major role in building students' technological expertise and abilities as guides for digital knowledge and skills. Students are educated by educators to use technology consciously, attitudes in technology, and web security. In addition, they educate students to know and utilize appropriate technologies for searching and speaking, cooperating, and creating works. Students must be encouraged to be logical, analytical, creative, and innovative by teachers. They give learners the opportunity to try new innovations, find creative ways to solve problems, and create innovative works with what they have. In building cooperation and educational networks between educators, students, and school stakeholders, teachers have a role comparable to collaborators and learning networks. Teachers collaborate to create appropriate curricula, share knowledge and exchange experiences, and find effective ways to use technology in teaching. This function makes teachers agents of change in realizing education that is active in the advancement of technology and the needs of a community group. They provide assistance to students to acquire appropriate abilities, plan learners who are ready for a challenging future, and participate in creative and sustainable societal structures (Alfalah, 2022).

Assessment and evaluation of PAI learning can be carried out using various methods, both traditional and information technology-based. Assignments, portfolios, and tests are the most common traditional methods. Tests, according to Hanafiah (2022), are an objective way to measure student learning outcomes. Assignments, on the other hand, are assignments given to students to measure how well they understand the topics they have learned. A portfolio is a collection of student work that can be used to measure

their educational progress. E-learning, e-assessment, and e-portfolio are IT-based methods that can be used for the evaluation and evaluation of PAI learning. E-learning is learning facilitated by information and communication technology (ICT), and e-assessment is an assessment carried out with ICT. An e-portfolio is a collection of student work that is stored and managed digitally. Experts have studied the use of information technology in the assessment and evaluation of PAI learning. The results of the study show that the assessment and evaluation of IT-based PAI learning has many benefits, such as: more effective and efficient; more accurate and objective; more engaging and entertaining for students; more accessible to students; and teachers find it easier to analyze them (Susanto, 2023).

One of the innovations that can be done by educators is to use digital learning evaluation. In this case, digital-based education evaluation uses a digital exam that is carried out at the end of the learning material with the internet. Today, the most commonly used is the computer-based online test, or Computer Based Test (CBT), better known as a computer-based test. CBT is developed by utilizing information and communication technology (ICT) to support learning. Initially, ICT for computer-based learning evaluation initially focused only on theoretical issues such as how effective the measurement of some items with the reliability score test is and how long it takes students to complete the test. Now, however, research using ICT for computer-based learning evaluation has shifted to development models using development algorithms. There is an ICT-based learning evaluation method in PAI material, which is multiple choice with feedback using a random number generator. This is used to prevent cheating, where multiple choice questions are randomized between one participant and another. To reduce the likelihood of cheaters in learning evaluation, question numbers will be randomized in addition to answer choices. Thus, the results of learning evaluations in PAI subjects will remain authentic with the use of this feature.

The 21st century is known as the century of knowledge. The 21st century is marked by the rapid growth of technology and information in all aspects of life, resulting in major changes in various areas of life. As a result, the twenty-first century has a strong demand to produce high-quality human resources, which has resulted in changes in the

system of human life. In this century, people must have the ability to have innovative and unique abilities (Rifa Hanifa Mardhiyah, Sekar Nurul Fajriyah Aldriani & Zulfikar, 2021).

The readiness of teachers to accept and implement the 21st century competency-based curriculum is a major challenge. Many educators may find it difficult to integrate new technologies and learning approaches because they are still familiar with conventional learning methods. As a result, it is important for teachers to get training and professional development. In addition, to ensure that this curriculum is successfully implemented, support from various parties, including the government, schools, and the community is needed. An additional recommendation is that educational resources should be created to support a modern competency-based PAI curriculum. To support learning, textbooks, digital learning media, and evaluation tools must be provided. Additionally, the study suggests that the curriculum should be evaluated and updated periodically to ensure that it is relevant and effective for addressing the ever-evolving educational challenges (Zainuri, 2024).

The purpose of education needs to adapt to the needs of the 21st century caused by the emergence of new professional industries that focus on knowledge work. The development of knowledge and skills that support the growth of students as future human resources is necessary in modern education. Entering the 21st century, known as the "century of knowledge", As a result of the rapid growth of technology and information during the Twenty-First Century, there have been major changes in all aspects of human life. In the 21st century, the development of superior human resources and meeting high standards is essential. Life requires creative, flexible, and courageous human resources (Puspa et al., 2023).

As technology and social environments evolve, skills-based education is becoming increasingly important to prepare students for an ever-changing future. This skill set is essential both in the workplace and in everyday life, where we need to adapt to rapid and complicated shifts. Therefore, education must focus on developing skills for modern life, such as problem-solving, critical thinking, innovation, adaptability, and digital literacy (Mansyur et al., 2024).

Two things that are very important to prepare a generation that is ready to compete in the 21st century are strengthening character education and student skills. 21st century skills are essential to teach students to know global civilization and prevent them from losing their national identity and character amid the onslaught of information technology this century. Modern character education emphasizes values such as integrity, religious, nationalist, mutual cooperation, and independence (Mizani, 2021).

A holistic and integrated approach is needed to develop a competitive young generation. In addition, supporting various stakeholders of government, the private sector, educational institutions, and civil society is essential to provide resources, guidance, and opportunities for young people to thrive and reach their full potential. In addition, issues of inclusion, equity, and sustainability must be considered when building a competitive young generation. By producing a competitive young generation, we can ensure that our country is ready to face opportunities and challenges around the world and create a good future for everyone. With a young generation that is competitive and does not want to lose to other countries, this can create a positive ecosystem (Mochamad Reza Alawi et al., 2024).

In PAI learning, there are many methods used. The lecture method is the most commonly used by educators in schools. This method is often used by both formal and non-formal educational institutions. In spreading da'wah, dai, ulama, and kiai also use the lecture method. Second, the discussion method. This is considered effective for teaching students to communicate interactively. This method also teaches them how to express opinions well and how to respond to people who disagree. Third, problem-solving methods. In twenty-first century learning, this approach is particularly well-known because problem-solving techniques teach learners how to think critically and can encourage them to research new things (Asiyah & Jazuli, 2022).

Schools are required to have 4Cs, namely communication, collaboration, critical thinking and problem solving, and creative thinking.

a. Communication

Communication is a process of language exchange that occurs in the human world and always involves people both in intrapersonal, group, and mass

contexts. Teachers must teach their students to communicate during the learning process, both in terms of subject matter and other things, both with teachers and students, the language used by students will have an impact on themselves.

b. Collaborative

If the student actively participates in learning. In small groups, they will learn better. They also tend to learn more and remember the material longer than if the material was given in other formats.

c. Critical Thinking and Problem Solving

Ability to think universally. In all the activities of life, we are constantly thinking about the state of nature. Thinking alone can be divided into several levels, ranging from the most basic ones that only need to be remembered to the most complex ones that require thinking. Critical thinking is the ability to argue systematically and structurally that is used in mental activities such as solving problems, making decisions, persuading others, conducting scientific research, and so on.

d. Creativity and innovation

Creativity is defined as an innovative, useful, and easy-to-understand human idea or mind. Innovation can be defined as something new for an individual or a group of individuals (society). This can be in the form of findings or debates (Nurhalimah et al., 2024).

In this century, teachers are more of a facilitator, helping students get information. However, this does not mean that the task of educators is easier, since they are facing an increasingly intelligent generation, or that students are smarter than their teachers. Being a teacher in the modern era is a difficult task because it must produce high-quality results that can compete by implementing or providing knowledge to students with skills from excellent programs that combine science, educational methods, and digital (Rohayati, 2022).

In addition, teachers must continue to improve themselves to keep up with the times so that they can help students acquire knowledge and skills, such as improving soft skills, mastering the ability to use technological media, and preparing teaching materials

as best as possible. This is very important in real-life application, because it is important to give students the spirit of learning (Susanti, Reni, 2024).

#### **D. Conclusion**

The use of technology is one of the innovations that can be used in Islamic religious education. By using digital platforms, mobile applications, or online learning, access becomes easier and more interactive for students. Simulations, animations, and videos can make learning more engaging and effective. One of the actions taken by teachers to support the achievement of educational goals is learning evaluation. In Islamic religious education, assessment is based on comprehensive standards about all aspects of a student's life, both psychologically and mentally as well as religious and spiritual. Islamic education faces many challenges in the twenty-first century, but also many lucrative opportunities. In the era of digital education, there are many opportunities to improve accessibility, create innovative learning methods, and improve religious understanding. The integration of science and religion in Islamic education is to create an educational program that blends disciplines with religious values, ensuring that students not only have academic abilities but also have a solid moral foundation.

If you highlight how important it is to innovate in how to assess and evaluate Islamic Religious Education (PAI) learning to overcome the challenges of the 21st century. The conventional evaluation system is considered ineffective in assessing students' competencies as a whole. By using digital technology and project-based methods, there may be an increase in the relevance of learning. Critical thinking skills, creativity, and the application of religious principles in daily life must be part of the evaluation. Therefore, students will be equipped with the relevant skills to compete around the world while still adhering to religious principles.

#### **E. Bibliography**

Abdurahman, A., Nelly, N., Suharto, S., Retnoningsih, R., Andrini, V. S., Arsiwie, S. R., Aimi, A., Aryanti, N., Wibowo, A. A. H., Meirani, W., & others. (2024). *Buku Ajar Teori Pembelajaran*. PT. Sonpedia Publishing Indonesia.

<https://books.google.co.id/books?id=UQMREQAAQBAJ>

Achadah, A. (2021). Implementasi Inovasi Kurikulum dan Pembelajaran. *Jurnal Tarbawi*, 09(01), 1–8.

Achmad, G. H., & Prastowo, A. (2022). Authentic Assessment Techniques on Cognitive Aspects in Islamic Religious Education Learning at Elementary School Level. *Jurnal Ilmiah Sekolah Dasar*, 6(1), 75–84.  
<https://doi.org/10.23887/jisd.v6i1.42636>

Alfalah, R. (2022). Menjadi guru di era society 5.0: Tantangan dan Peluang. *Open Society Foundations (OSF)*. <https://osf.io/4h38b/>

Anis Zohriah<sup>1</sup>, Hikmatul Fauzjiah<sup>2</sup>, Adnan<sup>3</sup>, M. shofwan M. N. B. (2023). Jurnal Dirosah Islamiyah Jurnal Dirosah Islamiyah. *Jurnal Dirosah Islamiyah Volume*, 5, 704–713. <https://doi.org/10.17467/jdi.v6i2.2244>

Aryanti, D. (2022). Tantangan Dan Potensi Pendidikan Islam Di Era Milenial. *EDU-RILIGIA: Jurnal Ilmu Pendidikan Islam Dan Keagamaan*, 6(2), 181–198.  
<https://doi.org/10.47006/er.v6i2.13162>

Asiyah, O. M., & Jazuli, M. F. (2022). Inovasi Pembelajaran Pai Abad 21. *Journal of Islamic Education Studies*, 2(Pembelajaran PAI abad 21), 170–182.

Bassar, A. S., Ruswandi, U., & Erihadiana, M. (2021). Pendidikan Islam: Peluang dan Tantangan di Era Global dan Multikultural. *J-PAI: Jurnal Pendidikan Agama Islam*, 8(1), 63–75. <https://doi.org/10.18860/jpai.v8i1.9577>

Dinn Wahyudin, R. S. (2020). Inovasi pendidikan dan pembelajaran. *Inovasi Pendidikan Dan Pembelajaran*, 2(3), 1–45.

Dr. Rina Febriana, M. P. (2021). *Evaluasi Pembelajaran*. Bumi Aksara.  
[https://books.google.co.id/books?id=moM\\_EAAAQBAJ](https://books.google.co.id/books?id=moM_EAAAQBAJ)

Erlina, E. E. (2020). Inovasi Pembelajaran Melalui Penelitian Dan Pengembangan Bahan Ajar. *Jurnal Al Bayan: Jurnal Jurusan Pendidikan Bahasa Arab*, 8(1), 121–148. <https://doi.org/10.24042/albayan.v8i1.356>

Fajri, Y. Al, & Sahlan, M. (2023). Evaluasi Pembelajaran Berbasis Information and Communication Technology (ICT) pada Mata Pelajaran PAI. *Research in Education and Technology (REGY)*, 1(2), 99–102.  
<https://doi.org/10.62590/regy.v1i2.77>

Fitriani, E. (2023). Konsep Pendidikan Islam di Era Abad 21: Tantangan dan Strateginya. *Tasamuh: Jurnal Studi Islam*, 15(1), 68–83.  
<https://doi.org/10.47945/tasamuh.v15i1.858>

Hadi, H. (2020). Penguatan Karakter Cinta Tanah Air Melalui. *Jurnal Genta Mulia*,



XI(2), 220–232.

- Halimah, S. (2021). Implementasi Pendekatan Hots (Higher Order Thinking Skills) Dalam Pembelajaran Pai. *Evaluasi: Jurnal Manajemen Pendidikan Islam*, 5(2), 342–362. <https://doi.org/10.32478/evaluasi.v5i2.762>
- Heryati, H., Borifar, M., & Wanto, D. (2023). Evaluation of Islamic Religious Education Learning School-Based Program. *Journal of Educational Analytics*, 2(1), 1–10. <https://doi.org/10.55927/jeda.v2i1.1908>
- Johan, B., Husnah, F. M., Puteri, A. D., Hartami, H., Rahmah, A. A., & Adnin, A. R. J. (2024). Tantangan dan Peluang Pendidikan Islam dalam Konteks Modern. *Jurnal Pendidikan Islam*, 1(4), 13. <https://doi.org/10.47134/pjpi.v1i4.758>
- Juhaeni, J., Adillah, N., Wafda, W., & Ulfah Sir, N. (2024). Konsep Pengembangan Evaluasi Berbasis Proyek dalam Pembelajaran Pendidikan Agama Islam. *Journal of Instructional and Development Researches*, 4(1), 18–24. <https://www.journal.iel-education.org/index.php/JIDeR/article/view/281>
- Mansyur, M. Z., Rahmadani, E., Siallagan, T., Astuti, R. nafsati, Purba, S., Kurniullah, A. Z., Ritnawati, Subakti, H., Nuryanti, A., Sinarmata, C., Khalik, M., & Amelia, U. (2024). *Belajar dan Pembelajaran Abad 21* (Issue March).
- Masitho, S., Paramansyah, A., Yanih, S., Sumarsih, T., Yuningsih, N., & Ramdhani, D. (2023). Pengembangan Assesmen Pembelajaran PAI pada Lembaga Pendidikan Madrasah dan Pondok Pesantren dalam Era Digital. *Jurnal Dirosah Islamiyah*, 5(3), 763–770. <https://doi.org/10.47467/jdi.v5i3.4171>
- Miftha Huljannah. (2021). Pentingnya Proses Evaluasi Dalam Pembelajaran Di Sekolah Dasar. *Educator (Directory of Elementary Education Journal)*, 2(2), 164–180. <https://doi.org/10.58176/edu.v2i2.157>
- Mizani, Z. M. (2021). Relevansi Konsep Pendidikan Humanis-Religius Abdurrahman Masud Dengan Penguatan Pendidikan Karakter Dan Keterampilan Peserta Didik Abad 21. *TA'DIBUNA: Jurnal Pendidikan Agama Islam*, 4(2), 166. <https://doi.org/10.30659/jpai.4.2.166-177>
- Mochamad Reza Alawi, Sindi Putri Aryani, & Reza Mauldy Raharja. (2024). Mewujudkan Generasi Muda yang Berdaya Saing untuk Masa Depan Bangsa. *Prosiding Seminar Nasional Ilmu Pendidikan*, 1(1), 82–87. <https://doi.org/10.62951/prosemnasipi.v1i1.10>
- Mufidah, I. (2022). Innovation of Islamic Religious Education In The Digital Era. *Tarlim : Jurnal Pendidikan Agama Islam*, 5(1), 15–28. <https://doi.org/10.32528/tarlim.v5i1.7053>

- Nengsih, C. O., Zulyusri, Z., & Lufri, L. (2022). Studi Literatur : Penggunaan Alat Evaluasi Pembelajaran IPA Mendukung Keterampilan Abad 21. *Jurnal Edukasi Dan Sains Biologi*, 4(1), 10–20. <https://doi.org/10.37301/esabi.v4i1.22>
- Nur Budiono, A., & Hatip, M. (2023). Asesmen Pembelajaran Pada Kurikulum Merdeka. *Jurnal Axioma : Jurnal Matematika Dan Pembelajaran*, 8(1), 109–123. <https://doi.org/10.56013/axi.v8i1.2044>
- Nur, S., & Jassin, A. (2022). Pengembangan Kurikulum Inovatif Dan Penerapan Asesmen Pembelajaran Pendidikan Agama Islam. *Al-Risalah: Jurnal Pendidikan Agama Islam*, 1(1), 44–56.
- Nurhalimah, S., Klaudia Selfa, S., Amanda, U., & Ilmi, D. (2024). Penguatan Pendidikan Peserta Didik Melalui Keterampilan 4C dengan Mengimplementasikan Pembelajaran Abad 21 dalam Pembelajaran Pendidikan Agama. *Jurnal Ilmu Pendidikan Islam*, 2(1), 239–249. <https://doi.org/10.59059/al-tarbiyah.v2i1.799>
- Nurlina, N., Nurdin, D., & Prihatin, E. (2023). Strategi Peningkatan Daya Saing melalui Program Pembelajaran Berbasis Pendidikan Islam. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 7(5), 6052–6064. <https://doi.org/10.31004/obsesi.v7i5.4660>
- Nursyamsiyah, S. (2023). Evaluation Model of Islamic Education Learning in Schools in The Digital Age. *International Journal of Social Learning (IJSL)*, 3(2), 188–201. <https://doi.org/10.47134/ijsl.v3i2.128>
- Puspa, C. I. S., Rahayu, D. N. O., & Parhan, M. (2023). Transformasi Pendidikan Abad 21 dalam Merealisasikan Sumber Daya Manusia Unggul Menuju Indonesia Emas 2045. *Jurnal Basicedu*, 7(5), 3309–3321. <https://doi.org/10.31004/basicedu.v7i5.5030>
- Rafliyanto, M., & Mukhlis, F. (2023). Pengembangan Inovasi Pembelajaran Pada Mata Pelajaran Pendidikan Agama Islam Di Lembaga Pendidikan Formal. *Tarbiyatuna Kajian Pendidikan Islam*, 7(1), 121. <https://doi.org/10.69552/tarbiyatuna.v7i1.1853>
- Raharjo, R. P. (2022). *Evaluasi pembelajaran*.
- Rifa Hanifa Mardhiyah, Sekar Nurul Fajriyah Aldriani, F. C., & Zulfikar, M. R. (2021). Pentingnya Keterampilan Belajar di Abad 21 sebagai Tuntutan dalam Pengembangan Sumber Daya Manusia. 71(1), 63–71.
- Rohayati, E. (2022). Pengaruh Metode Pembelajaran Abad 21 “Problem Based Learning” Pada Pelajaran PAI Materi Beriman Kepada Hari Akhir Terhadap Hasil Belajar Siswa Kelas VI .... *GUAU: Jurnal Pendidikan Profesi Guru Agama Islam*,

- 2(5), 59–64.  
<http://studentjournal.iaincurup.ac.id/index.php/guau%0Ahttp://202.162.210.184/index.php/guau/article/view/473%0Ahttp://202.162.210.184/index.php/guau/article/download/473/442>
- Rosnaeni, R. (2021). Karakteristik dan Asesmen Pembelajaran Abad 21. *Jurnal Basicedu*, 5(5), 4341–4350. <https://doi.org/10.31004/basicedu.v5i5.1548>
- Sari, E. Y. P., Ramadhani, N., Mutiah, P., & Inayati, N. L. (2024). Analisis Efektivitas Model Asesmen Pada Kurikulum PAI Abad 21. *Counselia; Jurnal Bimbingan Konseling Pendidikan Islam*, 5(1), 285–293. <https://doi.org/10.31943/counselia.v5i1.141>
- Sirojudin, S., As-syafi, U. I., Pendidikan, A., & Kunci, K. (2023). Tantangan dan Peluang Pendidikan Agama Islam di Era Digital : Pendekatan Kualitatif dalam Konteks Indonesia. *Spacious Islamic Studies*, 1(1), 63–77.
- Supriyadi. (2021). *Evaluasi Pendidikan*. Penerbit Nem. <https://books.google.co.id/books?id=HCEzEAAAQBAJ>
- Susanti, Reni, F. (2024). *Pendidikan Agama Islam Dan Perkembangan Sains Di Abad 21*. 7, 7073–7079.
- Susanto, A. (2023). Assessment Dan Evaluasi Pembelajaran Pendidikan Agama Islam Berbasis It. *Jurnal Tahsinia*, 4(2), 338–349.
- Sutikno, M. S. (2021). *Inovasi Pendidikan* (Issue 112).
- Suwito, K., Ondeng, S., Yahiji, K., & Pettasolong, N. (2024). Integrasi Ilmu dan Agama dalam Membangun Generasi Berintegritas Melalui Pendidikan Agama Islam. *Educator (Directory of Elementary Education Journal)*, 5(1), 19–38. <https://doi.org/10.58176/edu.v5i1.1535>
- Syafa, N. Z., & Mukhrij Sidqy, M. S. (2024). Inovasi Pembelajaran Pendidikan Agama Islam Dalam Menyusun Strategi Efektif Untuk Pembelajaran Aktif. *Fikrah : Journal of Islamic Education*, 8(1), 110. <https://doi.org/10.32507/fikrah.v8i1.2816>
- Zainuri, H. (2024). Pengembangan Kurikulum Pai Berbasis Kompetensi Abad 21. *Jurnal Pendidikan Islam*, 3(2), 43–49. <https://doi.org/10.35316/edupedia.v3i2.250>