



Learning Innovation Based on the Platform Merdeka Mengajar: A Systematic Literature Review

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Abstract

Innovation in this article is intended to analyze the use of the Platform Merdeka Mengajar as a transformation to empower teachers to deliver meaningful education in the face of disruptive times. The significance of education begins with teachers who are empowered to learn and teach freely. This research method utilizes a systematic literature review analyzed using the Research Collaboration Tools (Watase Uake). With a primary focus on various transversal competencies, the implementation of the Platform Merdeka Mengajar (PMM) in Islamic education is explored. This literature review seeks and analyzes descriptive and quantitative data on transversal competencies, with all data being research outcomes indexed in Scopus. The research findings indicate that, firstly, learning innovations in the form of transversal competencies can serve as a guide for educational units and teachers to enhance teacher competencies. The intended form of innovation is the integration of practical skills and supportive abilities, such as teamwork, interpersonal skills, critical thinking, and creativity, with the support of the Platform Merdeka Mengajar. Secondly, the Platform Merdeka Mengajar (PMM) facilitates teachers in accessing relevant Islamic education materials based on students' learning needs. Islamic Education teachers can collaborate with teachers across Indonesia regarding the current needs and learning styles of students, who are considered digital natives.

Key words: Innovation, Soft Skills, Hard Skills, Platform Merdeka Mengajar, Islamic Education.

INTRODUCTION

All students and teachers aspire to and have high hopes of realizing quality learning activities, resulting in adaptable students to the 21st century (Kuloglu et al., 2022). 21st-century skills consist of critical thinking and problem-solving skills, creativity and innovation, collaboration skills, and communication skills. This situation makes transversal competencies the foundation that students must possess. Based on the above, the education system needs to transform to focus more on the holistic development of student's skills and competencies. Oksana proposed that with transversal competencies, students can integrate knowledge and be able to face the complexity of society by applying the acquired skills (Zailani et al., 2021), (Alm et al., 2021), (Bilyk et al., 2022).

Transversal competencies offer a transformative enhancement of integrated competencies with formative and summative assessment for teachers or students. This can improve holistic lesson planning, mainly related to developing interpersonal skills and critical and creative thinking (Altinyelken, 2021). There are seven domains of transversal competencies: 1) Thinking and learning to learn; 2) Cultural competence, interaction, and self-expression; 3) Self-care and managing daily life; 4) Multiliteracy; 5) Information and Communication Technology (ICT) competence; 6) Work-life competence and entrepreneurship; and 7) Participation, engagement, and building a sustainable future (Palsa & Mertala, 2022). In the context of Islamic education, the policy of educational transformation within the independent learning program becomes a central issue in cultivating students' characters in accordance with the Pancasila learner profile (P5). Islamic education will continue to be integrated into the student's learning process, teachers, and school community through policies provided by the government (Saputra dkk, 2021).

The government's education policy in Indonesia, with the iconic Platform Merdeka Mengajar, is a breakthrough in transforming education towards realizing excellent human resources in Indonesia with the Pancasila learner profile. Merdeka belajar (independent learning) is an effort to learn using various differentiated learning media, where, when, who, and how to learn efficiently and effectively. There are various types of learning strategies used by teachers, students, teams, and educational institutions as relevant and interactive strategies. These strategies include discovery learning (DL), inquiry learning (IL), problem-based learning (PBL), project-based learning (PBL), and scientific learning (SL) (Dewi, 2022). This is relevant to the principles of transversal competencies. For example, firstly, integrating soft skills and hard skills, where learning should incorporate personal and technical skills. Secondly, teachers' high awareness that soft skills and hard skills can help facilitate collaboration among teachers within and between schools. Thirdly, educational assessment needs to be comprehensive at the beginning, core, and end of the learning process. Fourthly, teacher professionalism can be measured gradually over a period of one to two weeks by teachers based on the existing competencies and assessments on the Platform Merdeka Mengajar. Additionally, teachers can assess themselves as all learning planning activities are present on the Platform Merdeka

Mengajar. Islamic education serves as a framework for teaching holistic character education, integrated within the Pancasila learner profile (P5), which is necessary to enhance spirituality and the role of learners. Islamic education can touch upon various aspects of life and fields of knowledge, such as theology, science, social sciences, culture, and history (Agirreazkuenaga, 2019). Therefore, a multi-transdisciplinary approach that focuses on integrating various disciplines to enrich students' understanding and experiences starts with the comprehensive and essential understanding and perspective of teachers regarding how to practice religion relevant to the current era, having faith, piety towards the One Almighty God, and possessing noble character. It includes embracing global diversity, fostering collaboration, independence, critical thinking, and creativity. Internalizing the Pancasila learner profile and Islamic education becomes the primary indicator of character education transformation within independent learning (Salsabila, 2022).

Because Islamic education (Madrasah or public schools) plays a crucial role in developing students' character, religious literacy is needed as an experience of religion that is tolerant, humanistic, and enjoyable (Adipat & Chotikapanich, 2022). Critical Religious Education (CRE) and Variation Theory (VT), along with learning methods through the Platform Merdeka Mengajar, can enhance students' learning outcomes by encouraging teachers to design relevant learning experiences based on current religious models, enabling students to have a comprehensive perspective on practicing their faith (Billingsley & Nassaji, 2020), (Irawan, 2019). Of course, when planning lessons, it is essential to consider students' learning resources, the importance of authoritative religious education sources, and student's ability to provide assessments of religious phenomena (Erduran et al., 2019). The Platform Merdeka Mengajar facilitates teachers in providing meaningful learning experiences and offers diverse learning resources filtered by the Indonesian Ministry of Education and Culture (Kemendikbud RI).

Several studies have revealed the importance of competence in enhancing teachers' abilities to design learning that facilitates various students' learning needs (Donoso-González et al., 2022). Among them, Miguel A. Santos stated that teacher pedagogical competence based on facilitation has a positive impact on students' learning interests,

although the specific pedagogical practices are not detailed (Rego et al., 2022). Chileshe Busaka also stated that teachers need to integrate mathematical knowledge competence with soft skills (transversal competence), as this helps teachers effectively design learning activities and assessments concurrently. This study affirms that even though teachers may possess subject matter expertise, without pedagogical competence, the diverse learning needs of students will not be facilitated (Busaka et al., 2021). The research as mentioned earlier indicates a gap for teachers or prospective teachers, as there is a connection between soft skills and hard skills (transversal competence) in the classroom and the real world. Teachers tend to master only subject matter knowledge, while some only possess pedagogical competence (Puertas-Aguilar et al., 2021). Therefore, this article will explore scientific propositions formulated into the research question:

RQ1: How does the innovation of Islamic education learning based on the Platform Merdeka Mengajar occur?

RQ2: What is its contribution to Islamic education?

METHOD

Tools (Watase Uake) with a focus on educational innovation, transversal competence, and Islamic education learning based on the Platform Merdeka Mengajar (PMM). The research focus emphasizes that soft skills and hard skills (transversal competence) are inseparable components in the process of education, learning and assessment. (Wahyudi, 2020).

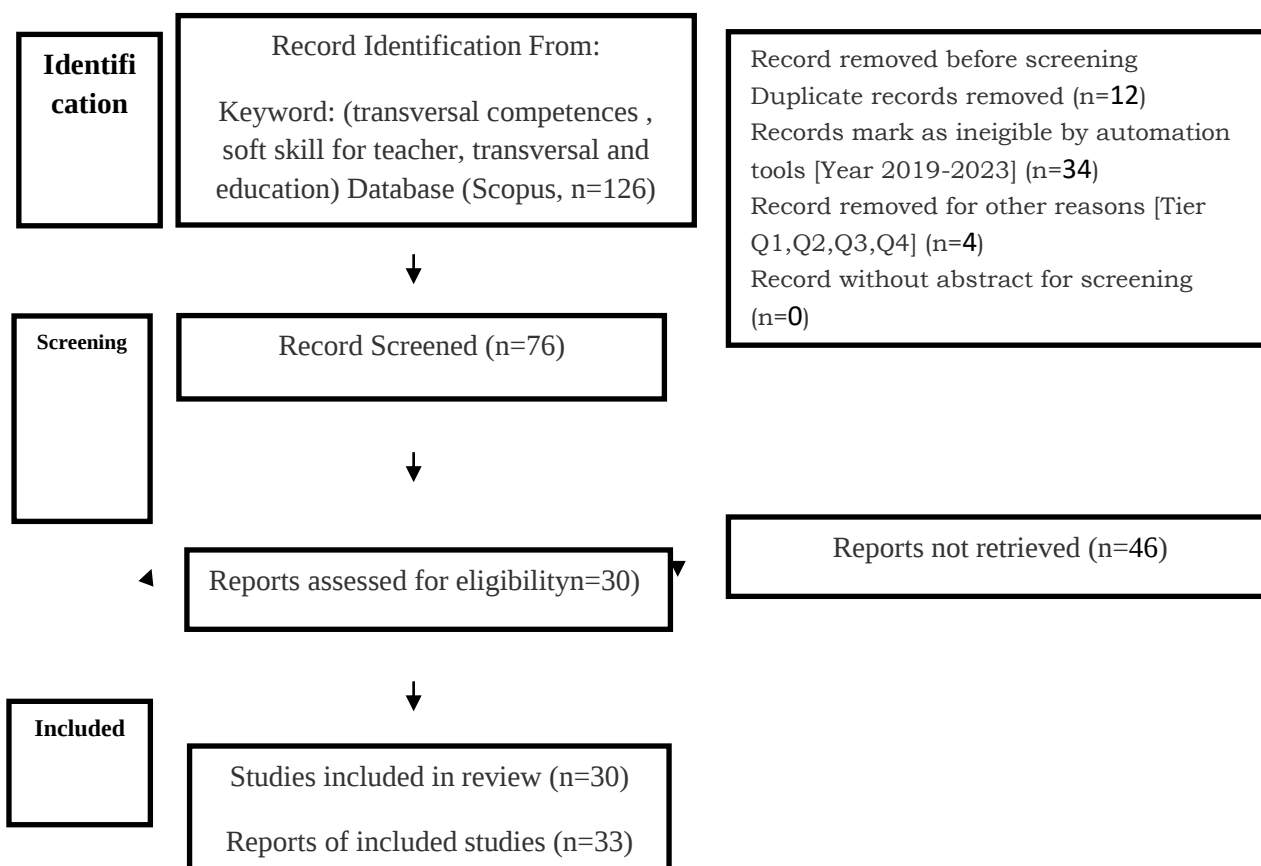
This review study aims to search for and analyze descriptive and quantitative data on educational innovation and transversal competence. All data must be derived from research results indexed in Scopus Q1, Q2, Q3, and Q4 (Wahyudi, 2020). The identification process yielded 55 journal articles related to the topic, 21 articles explicitly focusing on soft skills for teachers, and the keyword search for "transversal and education" resulted in 50 articles. In total, there were 126 articles identified across the Q1-Q4 categories.

The 55 articles, as mentioned earlier, were further examined using the anti-lock braking system (ABS) method to ensure that the obtained data aligns with the theme of the

research question, thereby minimizing irrelevant research topics. The resulting data correspond to the research question. Out of the total, there were three articles in Q4, 11 articles in Q3, 30 articles in Q2, and eight articles in Q1. Additionally, there were three articles that could not be identified by the search engine. Among the identified articles, 53 specifically focused on analyzing educational innovation with transversal competencies. In contrast, three articles focused on analyzing competencies without examining the content related to soft skills and hard skills (transversal).

Next, in the category of "soft skills for teachers," the subsequent distribution of articles was found: 1 article in Q1, six articles in Q2, eight articles in Q3, and three articles in Q4. Two articles were identified as not explicitly addressing the topic of soft skills for teachers. Regarding the data related to "Transversal and Education," the distribution is as follows: 9 articles in Q1, 15 articles in Q2, 15 articles in Q3, and eight articles in Q4. Three articles were not indexed by Scopus and did not meet the criteria for data validity.:

Diagram 1. Article Selection Flow



The data search was conducted from February 2023 using the Watase Uake tool, and the data was obtained from the Scopus database, using relevant keywords related to the research focus: transversal competencies, soft skills for teachers, transversal, and education. The selected data were studied to generate information about soft skills and hard skills (transversal competencies) in islamic education learning based on the independent teaching platform (Sitasari, 2022). The research data is classified according to RQ1 and RQ2 and then discussed in the research discussion.

RESULT AND DISCUSSION

Transversal Competencies in Islamic Education Based on the Platform Merdeka Mengajar

The transversal competencies in this study encompass skills, knowledge, and attitudes that can be applied in various social, academic, and professional contexts. According to Garcia Alvares' research, competencies relevant to the field of work greatly determine the quality of job outcomes, referred to as Job-related basic (JRB) competencies. However, socio-relational skills are also highly valued in teamwork, known as Socio-relational (SR) competencies, along with self-management skills, referred to as Self-management (SM) competencies (García-álvarez et al., 2022). The proposed transversal competencies in this article provide guidance and concrete steps for educators and educational institutions to incorporate and present relevant learning models aligned with 21st-century competencies (Odi et al., 2018), (Linh & Kasule, 2022).

The mentioned 21st-century competencies focus on both hard skills and soft skills, which are highly demanded in the industrial world and various fields of expertise today. As stated in Luis Casedas' research, there is a gap between what is taught in the classroom and the real-world need for soft and hard skills in the field. The method used in his study is psychoeducational intervention, an approach used in psychology to provide knowledge, understanding, and skills to students in facing the challenges of the real world. The intervention steps conducted in an educational context are as follows: First, identifying students' learning needs. Second, after the identification, conduct an assessment. It is third, providing information to teachers, parents, and students regarding the relevant learning from the assessment results. Fourth, delivering education about learning that suits students' learning needs and practicing it. Fifth, evaluating the intervention progress

to map the emerging and yet-to-emerge competencies in students. Sixth, planning follow-up actions and reflecting on the students' and teachers' progress. This enables teachers to monitor and evaluate students' competency achievements (Cásedas et al., 2022), (Tolochko et al., 2020).

Transversal competencies have generic characteristics and can be applied to various students' learning styles. Some examples of skills and knowledge included in this category are as follows: First, critical and analytical thinking skills. Second, practical communication skills. Third, teamwork skills. Fourth, complex problem-solving skills. Fifth self-management skills. Sixth, creativity and innovation. Seventh, entrepreneurship. Eighth, digital literacy. Ninth, intercultural skills. Helena Belchior also emphasizes that students, even until college graduates, should be able to adapt to the socioeconomic challenges that characterize the current era (Belchior-Rocha et al., 2022). These skills are crucial for success in the workplace and everyday life. Integrating transversal competencies into the school curriculum involves transforming teachers' competencies in teaching, thereby helping students prepare to have a personality that is compatible with the current world.

To produce students with a good personality, practical skills, and adaptability, it starts with having professional and competent teachers in the field of education. In his research, Pablo Fernandez Ariaz suggests that teachers in American universities have excellent personalities. Teachers exhibit high motivation in developing soft skills, and according to the survey conducted by Pablo, good teacher personalities have an impact on the quality of students. The teacher's personality can influence students as teachers and students constantly interact inside and outside the classroom, resulting in the transfer of positive practices from teachers to students.

To enhance the good personality of teachers, collaboration among schools and universities is practiced in the United States. In Indonesia, a collaboration between universities has also been implemented through the teacher practitioner program. Universities collaborate with academics and practitioners to improve the personality of students, teachers, and prospective teachers (Rusydiyah et al., 2020), (Fernández-Arias et al., 2021), (Kustini et al., 2022).

The description above suggests that a good learner can facilitate various learning needs of students, which can be accomplished through the development of both soft skills and hard

skills. This aligns with the findings of Romeo's research, stating that the more professional a teacher is, the more comprehensive their assessments become. Integrating assessment with learning activities is considered transversal (Garzón-Artacho et al., 2021). In the context of Islamic education, some texts convey a similar purpose and objective as transversal competencies. For example, the saying "The best of people are those who are most beneficial to others" implies the importance of having practical skills required in the workplace and possessing social skills for effective teamwork.

The analysis of the above data indicates that transversal competencies can support both online and offline learning processes, thereby helping students develop both soft skills and hard skills (Transversal). This statement aligns with Macqual's research findings based on data analysis using paper questionnaires and partial least square structural equation modeling (PLS-SEM) with Smartpls. The research shows that if teachers possess soft skills and hard skills, it can benefit them in controlling and assessing online and offline classes. It also contributes to the success of lesson planning, which is beneficial for both teacher's and students' learning needs (Macqual et al., 2021).

The learning needs that prioritize students have gained attention from educational institutions, social organizations, experts, and governments worldwide. One of these institutions is UNESCO, a United Nations agency working in the fields of education, science, and culture. UNESCO has formulated four pillars of education, one of which is "Learning to do," which relates to the development of both hard skills and soft skills. Soft skills and hard skills are crucial and highly needed in the field of education. In fact, education is the most significant part of preparing high-quality, resilient, skilled individuals who are ready to adapt to the changing times. Technology is a hallmark of this era, and as a result, the educational process has also transformed. What used to be offline learning has now become online learning, and hybrid learning methods that combine online and offline learning are being implemented (Unesco, 2023)

Hybrid learning conditions cannot be applied to all levels of education due to the differing learning needs of adults and children. Children require guided independent learning models, while adults need discussion-based learning models that involve critical thinking, analysis, argumentation, and reflective thinking skills (Akintolu & Letseka, 2021), (Kirk & King, 2022). Therefore, hybrid learning is relevant for middle school through higher

education levels (Shtaltovna & Muzzu, 2021). To support hybrid learning, various aspects such as teaching methods, models, concepts, and infrastructure play a crucial role in enhancing the soft skills and hard skills of teachers. As for the infrastructure aspect, a platform for independent teaching is necessary. The table below outlines the required tools:

Tabel 1. Platform Merdeka Mengajar

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	Merdeka Curriculum	Practical Ideas	Latest Information
	Introduction to Merdeka Curriculum	Project P5	Merdeka Belajar Gathering
	Merdeka Curriculum Implementation Training	Differentiated Learning	Merdeka Mengajar Bulletin June 2023
Platform			
	Teaching and Learning Activities	School Safety Climate	Merdeka Curriculum Festival
	Self-development	Game-based Learning	Webinar with UNICEF
	Seeking and Sharing Inspirations	Teacher Competencies	Merdeka Mengajar Selected Content

From the table above, the aspects of supporting infrastructure and facilities, the Merdeka Mengajar curriculum platform, subjects, and learning materials play a significant role in developing transversal competencies for adults, specifically teachers, and students. Through the Platform Merdeka Mengajar, learning materials for Islamic Education can be easily accessed, allowing both teachers and students to work professionally. The platform promotes lifelong learning, with students becoming lifelong learners and teachers being lifelong educators. All educational activities related to soft skills and hard skills are

recorded within the Platform Merdeka Mengajar, which supports accountability and learning assessment (Arnes, 2023).

Soft Skill and Hard Skill Competencies of Teachers in Islamic Education

Soft skill and hard skill competencies are inseparable units, systematically implemented both offline and online, through Hybrid learning in the format of technological platforms provided for teachers and school principals in preparing teaching materials, learning, and instructional design, including conducting formative and summative assessments (Kolaborasi, 2023). In detail, the Platform Merdeka Mengajar provides great benefits to teachers, as they can organize learning and assessments within a single platform (Hoang et al., 2020). Currently, all subjects, including Islamic Education, have been integrated into the Platform Merdeka Mengajar. Further analysis of transversal competencies in Islamic Education learning based on the Platform Merdeka Mengajar focuses on at least four aspects :

First, the best way to learn is through teaching, as emphasized in the Pedagogical approach of Service-Learning (SL). Teaching means facilitating students' learning while honing professional competencies. As a teacher, one must be able to organize time, energy, and thoughts, thus becoming a professional educator (Rego et al., 2022) (Bayu Mahendra, 2021). Professionalism in the current context is directed towards lifelong learning competencies. Teachers also need to demonstrate a commitment to lifelong learning. They should be able to continuously learn, develop themselves, and keep up with the latest developments in the field of education. These competencies include the ability to seek and implement educational innovations, participate in professional training, and engage in professional development activities (Garzón-Artacho et al., 2021), (Thwe & Kálmán, 2023). Second, the more professional teachers become, the more comprehensive they are in delivering classroom instruction. Religious knowledge reflects life skills such as empathy, personality, and social relationships (soft skills), while scientific knowledge reflects technical skills, mechanical skills, and practical skills (hard skills). When a teacher has a broad worldview and is supported by the ability to integrate both types of knowledge, they fulfill the expected competencies in transversal competencies. (Johnson et al., 2023). Third, lifelong learning, or learning throughout one's life, is a teaching found in all

religions, particularly in Islam. It emphasizes the importance of learning from the cradle to the grave. This is in line with synchronous and asynchronous learning methods. Research data from the Ministry of Communication and Informatics (Kominfo) and UNICEF regarding the behaviour of children, adolescents, and even adults have shown that 400 respondents spread across the country, representing urban and rural areas, are internet users and are closely connected to the digital world (digital natives). This has both positive and negative impacts. In the context of Islamic Education, this research has a positive impact, especially for teachers who use the internet to access and prepare lessons on the Platform Merdeka Mengajar. (Gatot S. Dewa Broto, 2017), (Case et al., 2015), (Boas, 2017).

Fourth, Learning Progress Measurement: Assessment is crucial in measuring students' learning progress. By conducting regular evaluations and measurements, teachers can determine the extent to which students have achieved the set learning goals. This information is essential for understanding students' level of understanding, identifying areas that need improvement, and designing appropriate teaching strategies. In the Platform Merdeka Mengajar, teachers can perform formative and summative assessments, which consist of a collection of diagnostic assessment packages based on specific phases or grades and subjects. This helps teachers obtain a systematic and measurable portfolio of students' learning processes and outcomes. (Hortigüela Alcalá et al., 2019).

Contributions to Students to Enhance Soft Skills and Hard Skills

The criteria for assessing teachers in the context of transversal competencies typically involve two aspects. Firstly, teachers initiate face-to-face activities by asking questions about concepts or topics covered in the previous session. The teacher observes students' ability to articulate the lessons they have learned from the previous meeting. The teacher diagnoses the students based on specific details related to soft skills competencies, such as verbal communication, confidence, and conceptual accuracy, descriptively.

Secondly, students present their individual or group work, portfolios, and projects. The teacher assesses the hard skills competencies, which include the students' portfolios, projects, and produced works. Subsequently, the teacher provides feedback on the students' projects through the Platform Merdeka Mengajar. This feedback aligns with the

assessment of the hard skills demonstrated in the students' projects. By implementing these assessment criteria, teachers can effectively evaluate and provide feedback on both the soft skills and hard skills competencies of their students in a transversal approach (McTighe et al., 2017).

Accurate assessment can be facilitated by supportive tools such as the Platform Merdeka Mengajar. With this platform, teachers can collaborate with educators throughout Indonesia, share best practices in teaching, improve their competencies, and assess students both offline and online. Carla Freire, in her work on Assessing graduates' transversal competences through an adapted MMI model: confident interview vs stress interview, presents academic breakthroughs in the field. Her findings explore synchronous and asynchronous learning approaches. In the synchronous approach, students are given designated time according to the required lesson hours for independent learning. Subsequently, they engage in collaborative learning with a tutor to discuss their learning outcomes. The results indicate that independent learning without tutor guidance negatively impacts students who lack problem-solving skills and have a fixed mindset. However, it becomes a positive aspect for students who possess problem-solving skills and have a growth mindset. This is influenced by students' intrinsic and extrinsic motivation in developing their soft skills and hard skills competencies. Therefore, the availability of platforms like Merdeka Mengajar plays a significant role in facilitating accurate assessments and supporting students' development of both soft skills and hard skills. The platform allows for effective collaboration, individualized learning, and the promotion of a growth mindset among students (Freire & Barbosa, 2023).

The research breakthrough by Carla Freire emphasizes the importance for teachers and educational institutions to deliver professional learning activities. Achieving teacher and educational institution professionalism is not possible without training provided by the institution or the Ministry of Education. Rodrigo Ojeda-Nahuelcura, in his study on the Impact of generic or transversal competencies on the performance of specialists in physical education and sports sciences: A systematic review, highlights the significance of professional training in improving teachers' performance. The research findings include four main points:

Firstly, teamwork is crucial, as teachers can discuss student learning achievements and

learning needs, sharing information and classroom findings among colleagues. Secondly, problem-solving skills are essential. Data from teacher discussions can serve as an initial indicator for diagnosing students' learning needs. Thirdly, commitment to creating student-centered learning environments facilitates diverse learning styles. Fourthly, interpersonal skills are essential, as teachers can engage in self-reflection and collaborative discussions with peers. Lastly, engaging in discussions with colleagues can help students become lifelong learners. These findings underscore the value of professional training in enhancing teachers' performance and promoting effective collaboration and reflection among educators. They also emphasize the importance of creating student-centered learning environments and developing interpersonal skills. Engaging in discussions with peers benefits teachers and students, fostering a lifelong learning mindset (Ojeda-Nahuelcura et al., 2023).

The findings of Julie Dowsett in 2023 assert that online learning is particularly relevant in enhancing transversal skills in doctoral programs or adult education. This is because online learning requires soft skills competencies, such as effective time management, consistency, and responsibility, which are typically possessed by adults. As a result, online learning activities can be maximized due to the feedback surveys conducted between tutors and participants (Dowsett & Lacey, 2023). Another research study confirms that online learners have ample space and time for teachers to develop their potential independently (Donoso-González et al., 2022). The better the learning platform provided for teachers, the more meaningful the learning experiences received by students in the classroom. These findings highlight the advantages of online learning, particularly for adult learners, as they already possess the necessary soft skills to thrive in this learning environment. Furthermore, providing high-quality learning platforms for teachers contributes to the overall effectiveness of the learning experiences received by students.

This study offers insights and perspectives in two aspects by examining the above data analysis. Firstly, practical learning activities will be achieved according to students' learning styles if teachers possess practical competence and pedagogical competence. The pedagogical approach of Service-Learning (SL) explains that service-based pedagogical learning (facilitation) has a positive impact on students' learning interest. Secondly, competence and assessment are inseparable, and this can be applied when teachers

receive specific training on assessment and teacher professionalism to enhance the quality of learning (Romeo et al., 2022).

The phenomenon of digital teachers and students above signals for all educational institutions to enhance the personality of the entire school community. Technological advancements coexist in the lives of both students and teachers. The line between "learning" and "playing" is skinny. All forms of assessment and learning processes are already available on the Platform Merdeka Mengajar. The Ministry of Education and Culture has curated all materials and content. The next step is how teachers can utilize the platform optimally to enhance students' soft and hard skills.

CONCLUSION

Based on the data above, this systematic literature review yields two findings. Firstly, soft and hard skills are integral and transversal competencies, combining practical and personal abilities to conduct assessments. These skills cannot be separated from the lives of digital students, technology-savvy students, and digital-native learners in the technological era. Therefore, the innovation of utilizing the Platform Merdeka Mengajar in enhancing transversal competencies is crucial. Secondly, Islamic education teachers can update their teaching media and activities in the classroom according to current educational issues worldwide (*Allimu auladakum fainnahum makhlukun fii zamanin khairu zamanikum*), meaning that children nowadays face challenges related to technological advancements, socio-cultural changes, and complex job market demands.

The learning innovation through transforming the Platform Merdeka Mengajar facilitates teachers in conducting formative assessments, and students' learning records can be effectively stored within the system. The entire learning system is transformed into the digital world, making it accessible to all teachers in cities, remote villages, and outside the country. However, it is essential to pay attention to the need for socializing the Platform Merdeka Mengajar among madrasah teachers, especially Islamic education teachers, by providing training and technical guidance on the usage and utilization of the learning platform for teachers.

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