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Professional learning of islamic education teachers in enhancing 21st century skills

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Abstract. *This study examines the role of professional learning in enhancing 21st-century learning skills (PAK21) among Islamic Education teachers. The study was conducted to explore how professional learning contributes to the development and implementation of 21st-century pedagogical practices in Islamic Education classrooms. Using a quantitative survey design, data were collected from 118 Islamic Education teachers through a structured questionnaire. The study focused on the relationship between professional learning and teachers' ability to integrate critical thinking, creativity, collaboration, and communication skills into their teaching practices. Data were analysed using appropriate statistical techniques to determine the strength and significance of the relationships among the variables. The findings indicate that participation in professional learning activities has a significant positive influence on the implementation of PAK21 skills among Islamic Education teachers. Teachers who actively engage in professional learning demonstrate higher levels of competence in applying student-centred approaches and fostering 21st-century learning skills in the classroom. The results suggest that continuous and structured professional learning is essential for strengthening teachers' pedagogical capabilities and supporting educational transformation in line with contemporary learning demands. This study contributes to the growing body of knowledge on teacher professional development and provides useful implications for policymakers, educational administrators, and teacher training institutions in improving the quality of Islamic Education.*

Keywords: Professional Learning; Islamic Education Teachers; 21st-Century Learning Skills; Teacher Development; Pedagogical Innovation

INTRODUCTION

The rapid transformation of education in the 21st century has created new expectations for teachers to adopt innovative pedagogical approaches that support the development of critical thinking, creativity, collaboration, and communication among students (UNESCO, 2020; OECD, 2019). These competencies, commonly referred to as 21st-century learning skills (PAK21) in Malaysia, have become essential elements of contemporary education and are strongly emphasised within the Malaysian education system (Ministry of Education Malaysia, 2023). Consequently, teachers are expected not only to possess subject-matter expertise but also to facilitate meaningful learning experiences that prepare students to meet the demands of an increasingly complex and interconnected world.

Professional learning has emerged as a crucial strategy for enhancing teachers' knowledge, pedagogical skills, and professional competence. Unlike traditional training programmes that often focus on short-term knowledge transmission, professional learning emphasises continuous, collaborative, and practice-oriented learning experiences that support teacher growth and instructional improvement (Desimone, 2009; Salo et al., 2024). Through professional learning, teachers can update their instructional knowledge, adapt to educational reforms, and improve the quality of teaching and learning processes.

Recent studies have highlighted the importance of sustained professional learning in improving teaching quality and student outcomes. Darling-Hammond et al. (2021) reported that effective professional learning enhances instructional effectiveness and promotes meaningful

educational change. Similarly, Kennedy et al. (2022) emphasised that professional learning should be continuous, collaborative, and directly connected to classroom practice in order to produce significant improvements in teaching performance.

For Islamic Education teachers, the implementation of PAK21 presents both opportunities and challenges. Contemporary educational expectations require teachers to integrate student-centred approaches that encourage critical thinking, creativity, collaboration, and communication while maintaining the values and principles of Islamic education. Therefore, professional learning becomes an important mechanism for helping Islamic Education teachers adapt to changing educational demands and enhance their pedagogical practices.

Despite increasing attention given to teacher professional learning, empirical studies examining its influence on PAK21 implementation among Islamic Education teachers remain limited. Most previous studies have focused on general teacher development without specifically investigating the contribution of professional learning to the implementation of 21st-century learning skills in Islamic Education contexts. Therefore, this study aims to examine the influence of professional learning on the implementation of PAK21 skills among Islamic Education teachers.

LITERATURE REVIEW

Professional Learning

Professional learning is widely recognised as a continuous process that enables teachers to enhance their professional knowledge, instructional practices, and pedagogical competencies. Desimone (2009) proposed that effective professional learning should include content focus, active learning, coherence, duration, and collective participation. These characteristics create meaningful learning experiences that encourage teachers to improve classroom instruction and student learning outcomes.

Similarly, Opfer and Pedder (2011) argued that teacher learning is influenced by the interaction between teachers, learning activities, and school contexts. Professional learning therefore extends beyond participation in courses and workshops and includes collaborative learning, reflective practice, and ongoing professional engagement. Recent scholarship by Salo et al. (2024) further emphasised that professional learning should be viewed as learning in and for professional practice, rather than isolated training events.

Empirical evidence indicates that professional learning contributes significantly to teacher effectiveness and educational improvement. Darling-Hammond et al. (2021) found that teachers who participate actively in professional learning are more likely to adopt innovative pedagogical approaches and improve student learning outcomes. Likewise, Kennedy et al. (2022) concluded that sustained professional learning plays a critical role in supporting instructional improvement and professional growth.

21st-Century Learning Skills (PAK21)

The concept of PAK21 has become a central focus of educational reform worldwide. In Malaysia, PAK21 emphasises the development of communication, collaboration, critical thinking, and creativity among students (Ministry of Education Malaysia, 2020). These competencies are essential for preparing learners to succeed in rapidly changing social, economic, and technological environments.

The Partnership for 21st Century Learning (P21, 2019) identified communication, collaboration, critical thinking, and creativity as core competencies required for lifelong learning and career readiness. Similarly, the OECD (2019) highlighted the importance of equipping students with higher-order thinking skills and problem-solving abilities to address future challenges effectively.

The successful implementation of PAK21 depends largely on teachers' pedagogical competence and instructional readiness. Teachers play a crucial role in creating learning environments that promote active engagement, inquiry, collaboration, and reflective thinking. Therefore, enhancing teachers' professional capacity is essential for ensuring effective implementation of PAK21.

Relationship Between Professional Learning and PAK21 Skills

Previous studies have consistently demonstrated positive relationships between professional learning and effective classroom practices. Professional learning provides opportunities for teachers to acquire new instructional strategies, strengthen pedagogical

competencies, and improve classroom performance (Darling-Hammond et al., 2021).

Furthermore, Kennedy et al. (2022) reported that teachers who engage in continuous professional learning are more likely to implement student-centred pedagogies that support critical thinking, collaboration, communication, and creativity. Similarly, Liu and Yin (2024) found that collaborative professional learning environments positively influence teachers' instructional practices and contribute to improved educational outcomes.

Based on the literature, professional learning appears to be a significant factor in enhancing teachers' capacity to implement PAK21 effectively. Therefore, examining the influence of professional learning on PAK21 skills among Islamic Education teachers is important for understanding how continuous professional development contributes to educational improvement.

METHOD

Research Design

This study employed a quantitative survey research design to examine the influence of professional learning on the implementation of PAK21 skills among Islamic Education teachers. A quantitative approach was considered appropriate because it enables researchers to collect numerical data and analyse relationships between variables using statistical procedures (Creswell & Creswell, 2023). Survey research is widely used in educational studies to investigate perceptions, attitudes, and practices within a specific population (Fraenkel et al., 2023).

Participants

The participants consisted of 118 Islamic Education teachers from secondary schools in the state of Perlis, Malaysia. The respondents were selected using stratified random sampling to ensure adequate representation from different categories of schools. Most respondents possessed bachelor's degrees in Islamic education or related fields, while a smaller proportion held master's degrees in Islamic education. Stratified random sampling was employed to enhance the representativeness of the sample and minimise sampling bias (Taherdoost, 2016).

Research Instrument

Data were collected using a structured questionnaire consisting of two sections. The first section measured professional learning practices, while the second section measured the implementation of PAK21 skills. All items were measured using a seven-point Likert scale ranging from 1 (Strongly Disagree) to 7 (Strongly Agree). The instrument was adapted from established instruments and modified to suit the context of Islamic Education.

Data Collection Procedures

Permission to conduct the study was obtained from the relevant educational authorities before data collection commenced. Questionnaires were distributed to respondents through both online and face-to-face approaches. Participation was voluntary, and respondents were assured of confidentiality and anonymity throughout the research process. A total of 118 completed questionnaires were collected and included in the final analysis.

Data Analysis

The collected data were analysed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics were used to determine the levels of professional learning and PAK21 skills. Pearson correlation analysis was conducted to examine the relationship between professional learning and PAK21 skills, while simple linear regression analysis was employed to determine the influence of professional learning on PAK21 implementation.

RESULT AND DISCUSSION

The findings revealed that Islamic Education teachers demonstrated a high level of professional learning ($M = 5.82$, $SD = 0.71$). This indicates that the respondents actively participated in various professional development activities aimed at improving their pedagogical knowledge and professional competencies. The finding supports the argument that professional learning serves as a continuous process that enhances teachers' instructional effectiveness and professional growth (Desimone, 2009; Salo et al., 2024).

The study also found that Islamic Education teachers demonstrated a high level of PAK21

skills ($M = 5.95$, $SD = 0.66$). This suggests that teachers frequently integrated communication, collaboration, critical thinking, and creativity into their teaching practices. Such findings reflect the growing adoption of student-centred learning approaches consistent with contemporary educational expectations (Partnership for 21st Century Learning, 2019).

Pearson correlation analysis revealed a significant positive relationship between professional learning and PAK21 skills ($r = .68$, $p < .001$). The result indicates that teachers who actively engage in professional learning activities are more likely to implement PAK21 effectively in their classrooms. This finding is consistent with previous studies that reported positive relationships between professional learning and instructional improvement (Darling-Hammond et al., 2021; Kennedy et al., 2022).

Furthermore, regression analysis demonstrated that professional learning significantly predicts the implementation of PAK21 skills among Islamic Education teachers ($\beta = .61$, $p < .001$). The regression model explained 46% of the variance in PAK21 implementation ($R^2 = .46$). This finding supports the model of teacher professional growth proposed by Clarke and Hollingsworth (2002), which emphasises the role of professional learning in transforming teachers' knowledge and classroom practices. Similarly, Liu and Yin (2024) found that collaborative professional learning environments positively influence instructional quality and educational outcomes.

Overall, the findings indicate that professional learning plays a significant role in strengthening the implementation of PAK21 among Islamic Education teachers. Teachers who continuously engage in professional learning opportunities are more likely to adopt innovative and student-centred pedagogical approaches that foster communication, collaboration, critical thinking, and creativity among students.

CONCLUSION

This study examined the influence of professional learning on the implementation of PAK21 skills among Islamic Education teachers. The findings revealed high levels of both professional learning and PAK21 implementation among the respondents. The study further established a significant positive relationship between professional learning and PAK21 skills and confirmed that professional learning significantly predicts the implementation of PAK21 among Islamic Education teachers.

The findings highlight the importance of continuous professional learning in enhancing teachers' pedagogical competencies and supporting educational transformation. Educational authorities, school leaders, and teacher education institutions should continue to strengthen structured and sustainable professional learning initiatives that support the effective implementation of PAK21.

Future studies should involve larger samples from different geographical regions and educational settings to improve the generalisability of the findings. Additional variables such as teacher competence, school leadership, and organisational support may also be explored to provide a more comprehensive understanding of factors influencing PAK21 implementation.

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