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EXPLORING THE CULTIVATION OF DIGITAL SKILLS AMONG ISLAMIC EDUCATION TEACHERS IN TEACHING AND LEARNING IN SELANGOR DARUL EHSAN

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Abstract*: Digital skills among Islamic Education teachers play an important role in ensuring the effectiveness of teaching and learning in the modern technological era. This study aims to explore the acculturation of digital skills among Islamic Education teachers in Selangor through a qualitative approach involving face-to-face interviews with nine teachers, document analysis and classroom observations. The study findings reveal that the level of technology integration is still limited, with most teachers only at the Substitution and Augmentation levels in the SAMR model, without reaching a higher level of learning transformation. In response to this challenge, this study proposes the Islamic Education Teachers Digital Skills Integration Model (MIKD-GPI) which consists of three main components: Technology Training and Mastery, Infrastructure and Institutional Support, and Digital-Based Pedagogical Transformation. This model is based on the TPACK and SAMR frameworks, and aims to improve teachers' understanding of effectively incorporating technology into teaching and learning. In conclusion, this study contributes to the academic discussion on the acculturation of digital skills by offering a model that can help teachers move to a higher level of technology integration. The implications of this study emphasize the need for systematic professional training, improved technological infrastructure, and strong institutional support to ensure the success of digital skills in Islamic Education. Future studies are suggested to evaluate the effectiveness of this model in a broader educational context.*

Keywords*: Digital Skills, Islamic Education, TPACK Model, SAMR Model, Digital Pedagogical Transformation*

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Introduction

The cultivation of digital skills among Islamic education teachers is a critical factor in ensuring effective teaching and learning in Selangor. While digital education offers opportunities for innovation, many teachers struggle with limited training, inadequate infrastructure, and insufficient institutional support (Muh Ibnu Sholeh, 2023; Hamdanah et al., 2024). The lack of digital competency has resulted in low adoption of technology in Islamic education classrooms, restricting innovative pedagogical practices (Jahidih Saili et al., 2024). Furthermore, the rapid transformation of education in the Industry 5.0 era demands greater technological readiness and adaptability from educators (Syarif Hidayat & Meirani Rahayu Rukmanda, 2024). Despite the potential benefits, financial constraints and the absence of professional development programs remain key barriers (Asikin Nor et al., 2024). Additionally, research highlights the need for interdisciplinary collaboration and policy reforms to support the digital transformation of Islamic education (Bainar, 2025). Therefore, this study explores the cultivation of digital skills among Islamic education teachers in Selangor, addressing challenges and identifying strategies to enhance digital literacy, readiness, and integration in teaching and learning.

Selangor is a strategic location for conducting a study on the digital skills of Islamic Education teachers due to its rapid development in infrastructure and various digital initiatives, including the state government's effort to introduce STEM education based on the Qur'an in religious schools reflecting a strong commitment to integrating technology in Islamic education (Astro Awani, 2024). Furthermore, Selangor has a high number of Islamic Education teachers, particularly under the administration of the Selangor Islamic Religious Department (JAIS), and a study by Lubis et al. (2017) revealed that these teachers demonstrate a high level of readiness in using multimedia for teaching purposes. Despite its advancement, digital gaps still exist in rural areas; for example, a study by Mohamad Sidek and Mahmud (2024) found that the perceived ease of use of digital skills among Mathematics teachers in Sepang was high, while perceived usefulness remained at a moderate level. In addition, Selangor actively conducts professional development training for teachers, particularly in ICT, making it an ideal context to assess the effectiveness of digital skills development programs (Jabatan Pendidikan Wilayah Persekutuan Labuan, 2023). Moreover, Islamic Education demands a holistic approach that integrates cognitive, affective, and spiritual elements, and Moyang and Abdul Razak (2022) found that Islamic Education teachers in Selangor successfully adapted digital tools such as Google Meet to deliver value-based and spiritually rich instruction.

Literature Review

There are nine points will be discussed in Literature Review. The literature review plays a crucial role in this study as it provides a theoretical and empirical foundation for understanding the cultivation of digital skills among Islamic education teachers in teaching and learning. By examining previous research, this chapter identifies key concepts, theoretical models, and challenges related to digital skill integration in education. Literature serves as the basis for constructing a conceptual framework that aligns with the study's objectives, offering insights into how digital skills are cultivated, the factors influencing their adoption, and the impact on teaching effectiveness. This chapter builds upon Introduction chapter by further exploring the problem statement, objectives, and the gaps identified in digital education within Islamic education settings. The synthesis of past literature supports the study’s focus on professional development, institutional support, and digital readiness, providing a solid framework for qualitative inquiry into the cultivation of digital skills among Islamic education teachers in Selangor.

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Concept of Digital Skills in Islamic Education

Sustainable Digital skills in education refer to the ability to effectively use technology, digital tools, and online resources to enhance teaching and learning (Muh Ibnu Sholeh, 2023). In the context of Islamic education, digital skills encompass not only basic technological literacy but also the capacity to integrate digital pedagogical methods while maintaining Islamic values (Bainar, 2025). These skills include the use of digital platforms, multimedia content, and online assessment tools, which are essential for modern teaching practices (Jahidih Saili et al., 2024). The importance of digital skills for Islamic education teachers lies in their role in fostering interactive and student-centered learning experiences. Teachers equipped with digital competencies can improve engagement, facilitate personalized learning, and enhance students' access to Islamic educational materials (Hamdanah et al., 2024). However, many teachers face challenges due to a lack of professional training, limited infrastructure, and insufficient institutional support (Asikin Nor et al., 2024). The effectiveness of teaching and learning in Islamic education depends on how well teachers integrate digital tools into their pedagogical approaches. Studies suggest that digital transformation can increase learning motivation, accessibility, and inclusivity, ultimately improving teaching effectiveness (Syarif Hidayat & Meirani Rahayu Rukmanda, 2024). Therefore, this study aims to explore how digital skill cultivation can be enhanced among Islamic education teachers in Selangor to ensure a more effective and technologically adaptive learning environment.

Cultivation of Digital Skills Among Islamic Education Teachers

The cultivation of digital skills in education refers to the process of continuously developing, refining, and integrating digital competencies into teaching practices. In the context of Islamic education, this involves not only acquiring technical proficiency but also embedding technology in pedagogical strategies while ensuring alignment with Islamic values (Bainar, 2025). Cultivating digital skills requires ongoing professional development, hands-on practice, and institutional support to facilitate meaningful digital transformation in the classroom (Asikin Nor et al., 2024). Several factors contribute to the successful cultivation of digital skills among teachers. Access to professional training, administrative encouragement, and exposure to digital teaching methodologies play a crucial role (Jahidih Saili et al., 2024). Additionally, interdisciplinary collaboration and policy support enhance teachers' confidence and readiness to integrate digital tools effectively (Syarif Hidayat & Meirani Rahayu Rukmanda, 2024). Despite its importance, the cultivation of digital skills faces several challenges. Teachers often struggle with a lack of structured digital literacy programs, insufficient infrastructure, and financial constraints that hinder access to technological tools (Hamdanah et al., 2024). Furthermore, some educators exhibit resistance to change due to limited experience with digital technology or fear of disrupting traditional teaching methods (Muh Ibnu Sholeh, 2023). Addressing these challenges requires targeted strategies, including capacity-building initiatives and structured digital education policies, to enhance digital competency among Islamic education teachers in Selangor.

Readiness of Islamic Education Teachers for the Use of Technology in PdP

The readiness of Islamic education teachers to integrate technology into teaching and learning (PdP) is a critical factor in the successful cultivation of digital skills. Readiness encompasses the ability, confidence, and willingness of teachers to adopt digital tools in classroom instruction. However, studies indicate that many Islamic education teachers still face difficulties in adapting to digital technologies due to limited exposure and inadequate support systems (Hamdanah et al., 2024). A lack of familiarity with digital teaching methods has resulted in minimal integration of technology, reducing the effectiveness of technology-enhanced

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pedagogy in Islamic education (Muh Ibnu Sholeh, 2023). Several factors influence teacher readiness for digital skills, including access to digital infrastructure, administrative support, and personal attitudes toward technological change (Syarif Hidayat & Meirani Rahayu Rukmanda, 2024). Teachers who receive continuous guidance and professional development opportunities are more likely to embrace digital teaching methods, whereas those without proper training struggle to incorporate technology effectively (Bainar, 2025). A significant issue affecting teacher readiness is the lack of training and professional development in the use of technology. Many Islamic education teachers do not receive structured training programs, leading to low confidence and ineffective technology use in PdP (Jahidih Saili et al., 2024; Asikin Nor et al., 2024). Addressing these gaps requires targeted digital literacy programs and ongoing mentorship to enhance the digital competency of teachers, ensuring they are well-prepared to integrate technology into their teaching practices.

Digital Education Policy and Institutional Support

Digital education policies in Malaysia aim to enhance the integration of technology in teaching and learning by providing a framework for digital transformation in schools. These policies emphasize the importance of digital literacy, training programs, and infrastructure development to support teachers in implementing technology-based teaching strategies (Muh Ibnu Sholeh, 2023). However, despite these initiatives, Islamic education teachers often struggle to fully adopt digital tools due to inconsistencies in policy implementation and a lack of tailored training programs for religious education settings (Hamdanah et al., 2024). Educational institutions play a crucial role in empowering the use of technology in the classroom by providing structured professional development, facilitating access to digital resources, and fostering a culture of innovation among teachers (Syarif Hidayat & Meirani Rahayu Rukmanda, 2024). When institutions actively support digital learning, teachers become more confident and willing to explore new digital pedagogies, enhancing the overall teaching and learning experience in Islamic education (Bainar, 2025). However, challenges remain, particularly in terms of lack of infrastructure and policy support. Many schools face issues such as inadequate internet access, outdated technological equipment, and insufficient funding for digital initiatives (Muh Ibnu Sholeh, 2023). Additionally, the absence of clear institutional policies to support Islamic education teachers in technology adoption further limits their ability to integrate digital tools effectively (Hamdanah et al., 2024). Addressing these challenges requires stronger institutional commitment, improved resource allocation, and targeted policy reforms to ensure digital education policies effectively support Islamic education teachers in Selangor.

Related Models and Theoretical Frameworks

The Technological Pedagogical Content Knowledge (TPACK) model provides a structured approach to enhancing digital skills among teachers by integrating technology with pedagogical and content knowledge. This model emphasizes that teachers must not only master subject content but also understand how to effectively use technology to deliver that content in an engaging and meaningful way (Pernilla Nilsson, 2024). For Islamic education teachers, TPACK is essential in ensuring that digital tools are used appropriately while maintaining the integrity of religious teachings. A Digital Skills Framework for Islamic Education is necessary to provide a structured approach for empowering teachers in developing their digital competencies. This framework would outline key digital skills, training methodologies, and implementation strategies tailored specifically for Islamic education settings (Syarif Hidayat & Meirani Rahayu Rukmanda, 2024). By adopting such a framework, teachers can systematically enhance their digital skills, leading to more effective technology integration in teaching and learning. Furthermore, the relationship between TPACK, SAMR (Substitution, Augmentation,

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Modification, and Redefinition), and Islamic education models plays a crucial role in cultivating digital adoption in PdP. While TPACK focuses on the integration of technology, the SAMR model provides a structured way to evaluate how technology transforms teaching practices. When aligned with Islamic education principles, these models ensure that technology is integrated in a way that enhances learning outcomes while preserving the values and ethics of Islamic teachings (Bainar, 2025). This study aims to explore how these models can collectively support digital skill cultivation among Islamic education teachers in Selangor.

Past Studies Related to Digital Skills in Islamic Education

Several studies have explored the integration of digital skills among Islamic education teachers, highlighting both opportunities and challenges in adopting technology-enhanced pedagogy. Bainar (2025) emphasized the importance of digital tools in improving student engagement and learning outcomes. However, the study also identified barriers such as limited technological literacy among teachers, insufficient digital resources, and the challenge of aligning digital content with Islamic values. These findings suggest that while digital education holds great potential, structured training and institutional support are necessary for successful implementation. Comparative studies on the use of technology in Islamic education in other countries provide additional insights. Research in Indonesia and the Middle East has shown that well-structured digital education policies, combined with professional development programs, significantly enhance teachers' digital skills (Hamdanah et al., 2024). However, countries with less emphasis on digital pedagogy struggle with low adoption rates and resistance to technological change among educators (Syarif Hidayat & Meirani Rahayu Rukmanda, 2024). Previous studies indicate both advantages and disadvantages in different approaches to digital skill development. While online learning platforms and gamification have improved accessibility and student motivation, their effectiveness depends on teacher competence and institutional infrastructure (Muh Ibnu Sholeh, 2023). Challenges such as the lack of training, poor digital infrastructure, and policy gaps hinder widespread adoption. This study builds upon these findings by focusing on the cultivation of digital skills among Islamic education teachers in Selangor, identifying strategies to overcome existing barriers and enhance technology integration in teaching and learning.

Synthesis of Past Studies and Research Gaps

Past studies have highlighted the importance of digital skills in education, demonstrating how technology enhances teaching effectiveness and student engagement. Research by Bainar (2025) and Muh Ibnu Sholeh (2023) supports the notion that digital tools improve accessibility and pedagogical efficiency. However, despite these benefits, many Islamic education teachers still struggle with limited digital competency, lack of training, and insufficient institutional support (Jahidih Saili et al., 2024; Asikin Nor et al., 2024). These challenges indicate a significant gap between theoretical advantages and practical implementation.The research gap in this study lies in the limited exploration of digital skill cultivation among Islamic education teachers in Selangor. While studies from other regions, such as Indonesia and the Middle East, provide insights into technology adoption (Hamdanah et al., 2024), research specifically addressing the unique needs, challenges, and institutional support for Islamic education teachers in Selangor remains scarce. Given the evolving digital education policies in Malaysia, it is crucial to investigate how these policies influence teachers' readiness and digital competency (Syarif Hidayat & Meirani Rahayu Rukmanda, 2024). This study aligns with its research objectives by exploring strategies to enhance digital skill cultivation, address barriers to technology integration, and develop a holistic framework for digital transformation in Islamic education. The findings will contribute to bridging the gap between digital education policies

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and actual classroom practices, ensuring that Islamic education teachers in Selangor are adequately equipped for the demands of 21st-century learning.

Conceptual Framework of the Study

Based on the literature reviewed, this study proposes a conceptual framework that examines the relationship between teacher readiness, the cultivation of digital skills, and teaching effectiveness in Islamic education. The framework integrates key factors such as technological access, training opportunities, institutional support, and teacher attitudes (Jahidih Saili et al., 2024; Asikin Nor et al., 2024). It aligns with the TPACK model (Pernilla Nilsson, 2024) and incorporates elements of digital education policies and professional development frameworks (Muh Ibnu Sholeh, 2023; Bainar, 2025). The relationship between readiness factors, digital skills culture, and teaching effectiveness is central to this framework. Readiness factors include teachers' willingness, confidence, and institutional support in adopting technology (Hamdanah et al., 2024). The digital skills culture is shaped by training programs, access to digital tools, and the extent of integration into pedagogy (Syarif Hidayat & Meirani Rahayu Rukmanda, 2024). These factors influence teaching effectiveness, as teachers with strong digital competency can create engaging, interactive, and student-centered learning experiences (Bainar, 2025). This framework will be used in the study methodology to guide qualitative data collection and analysis. It will help identify the challenges and best practices in cultivating digital skills among Islamic education teachers in Selangor. Through interviews and thematic analysis, the study will explore how digital skill development can be enhanced, ensuring better alignment between technology use and Islamic educational values.

Summary of Literature Review

This chapter has explored key concepts, models, and past studies related to the cultivation of digital skills among Islamic education teachers. The literature highlights the importance of digital skills in enhancing teaching effectiveness (Muh Ibnu Sholeh, 2023; Bainar, 2025) and the role of teacher readiness, institutional support, and digital education policies in promoting digital transformation in classrooms (Hamdanah et al., 2024; Asikin Nor et al., 2024). Despite the benefits, challenges such as lack of training, inadequate infrastructure, and policy gaps remain significant barriers to the successful adoption of technology in Islamic education (Jahidih Saili et al., 2024). This study fills the research gap by specifically examining the cultivation of digital skills among Islamic education teachers in Selangor, a context that has received limited attention in previous research. Unlike studies focusing on general teacher readiness, this study explores how digital skills can be effectively nurtured through structured training, policy enhancements, and professional development programs (Syarif Hidayat & Meirani Rahayu Rukmanda, 2024). The relationship between Literature Review and Study Methodology lies in the application of theoretical insights to the study’s qualitative research design. The conceptual framework developed in this chapter will guide the data collection and analysis process, ensuring that the study effectively investigates teacher readiness, institutional challenges, and strategies for digital skill cultivation in Islamic education in Selangor.

Reseach Methodology

This chapter outlines the research methodology employed in this study, which follows a basic qualitative research design to explore the cultivation of digital skills among Islamic education teachers in Selangor. The qualitative approach is chosen to gain in-depth insights into teachers' experiences, challenges, and strategies in integrating digital skills into teaching and learning. This chapter details the research design, data collection methods, sampling techniques, and data analysis procedures, ensuring alignment with the study's objectives. By utilizing qualitative

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methods such as interviews and thematic analysis, this study aims to provide a comprehensive understanding of how digital skills can be effectively cultivated among Islamic education teachers.

Justification for Using Qualitative Research

The researcher employs a qualitative research approach as it is the most suitable method for exploring the cultivation of digital skills among Islamic education teachers in Selangor. Qualitative research allows for a deep understanding of participants' experiences, perceptions, and challenges, which is essential for studying complex educational phenomena (Creswell, 2009). Unlike quantitative methods that rely on numerical data, qualitative research focuses on contextual insights, patterns, and meanings derived from participants' narratives (Dawson, 2002). Furthermore, qualitative research is aligned with interpretivism, which seeks to understand human experiences rather than measure them statistically (Goldkuhl, 2012). Through methods such as interviews and thematic analysis, the researcher can explore teachers' perspectives on digital skill integration in teaching and learning (Saldaña, 2021). Additionally, case study methodology, as suggested by Yin (2009), provides a structured yet flexible framework to investigate real-world challenges in Islamic education. This approach enables the researcher to gather rich, descriptive data to formulate strategies that enhance digital skills cultivation. Given the study's focus on understanding teacher readiness, institutional support, and pedagogical practices, qualitative research is the most appropriate methodology to capture the depth and complexity of the subject matter.

Qualitative Data Collection: Observation and In-Depth Interview

In qualitative research, data collection methods such as observation and in-depth interviews provide rich and detailed insights into participants' experiences, behaviors, and perceptions. These methods allow the researcher to explore the complexities of real-life educational settings, making them highly suitable for studying the cultivation of digital skills among Islamic education teachers in Selangor (Creswell, 2009).

Observation as a Data Collection Method

Observation involves systematically watching and recording behaviors, interactions, and environmental factors within a natural setting. This method enables the researcher to capture real-time practices, teaching strategies, and digital tool usage among Islamic education teachers (Dawson, 2002). By directly observing teachers in their classrooms, the researcher gains firsthand insights into how digital skills are integrated into lesson delivery and the challenges they encounter.

Through non-participant observation, the researcher documented how teachers utilized technology in lesson planning, instruction, and student engagement. This approach provided objective data on the actual implementation of digital teaching strategies rather than relying solely on self-reported information (Saldaña, 2021). The observations helped validate interview findings and offered a comprehensive understanding of digital skill cultivation in secondary schools in Selangor.

In-Depth Interview as a Data Collection Method

In-depth interviews allow the researcher to explore participants' perspectives, motivations, and experiences in a structured yet flexible manner. These interviews provide detailed narratives about teachers' digital skill development, readiness, and institutional challenges (Yin, 2009). Since qualitative research seeks depth rather than breadth, in-depth interviews were essential for gathering nuanced insights into the lived experiences of Islamic education teachers. The

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researcher conducted face-to-face interviews with nine participants, each with over eight years of teaching experience in secondary schools in Selangor. This criterion ensured that participants had substantial teaching exposure and sufficient familiarity with digital education policies and technological integration challenges. The semi-structured interview format allowed for open-ended responses, encouraging teachers to share their experiences, concerns, and strategies in cultivating digital skills (Goldkuhl, 2012).

Sampling and Participant Selection

The study employed purposeful sampling, a widely used technique in qualitative research that selects participants based on their expertise, relevance to the study, and ability to provide meaningful insights (Creswell, 2009). The nine participants were carefully chosen to reflect a diverse range of experiences in digital education. By selecting teachers with more than eight years of experience, the researcher ensured that participants had encountered various pedagogical shifts, digital policy implementations, and institutional challenges over time.The decision to interview nine participants was justified by the principle of data saturation—a point where additional interviews no longer generate new information (Saldaña, 2021). Given that qualitative studies prioritize depth over numerical representation, nine participants provided rich, meaningful data that addressed the study's research objectives while maintaining feasibility.

Justification for Face-to-Face Interviews and Observation

Face-to-face interviews allowed the researcher to observe non-verbal cues, clarify responses in real-time, and build rapport with participants. Unlike online or phone interviews, in-person interactions foster trust and openness, leading to more authentic and detailed responses (Dawson, 2002). These interviews also enabled the researcher to probe deeper into teachers' challenges, digital training experiences, and institutional support structures. Observation complemented the interviews by providing real-world validation of self-reported experiences. Teachers' stated practices during interviews were cross-checked with actual classroom observations, ensuring a holistic understanding of digital skill cultivation (Yin, 2009). The combination of interviews and observations strengthened data credibility and aligned with the study's qualitative research methodology. By integrating face-to-face interviews and observations, the researcher effectively captured both subjective experiences and objective classroom practices, ensuring a comprehensive exploration of digital skill cultivation among Islamic education teachers in Selangor.

Summary of Chapter 3: Research Methodology

This chapter presents the research methodology used in this study, which follows a basic qualitative research design to explore the cultivation of digital skills among Islamic education teachers in Selangor (Creswell, 2009; Dawson, 2002). A qualitative approach was selected because it allows the researcher to gain in-depth insights into teachers' experiences, challenges, and strategies in integrating digital skills into their teaching and learning processes (Goldkuhl, 2012; Yin, 2009). The study employs face-to-face interviews and classroom observations as data collection methods, ensuring rich and detailed data (Saldaña, 2021; Dawson, 2002). Nine Islamic education teachers with over eight years of teaching experience were selected through purposeful sampling, ensuring that participants had substantial exposure to digital education policies and institutional support (Creswell, 2009). Thematic analysis was chosen as the primary data analysis method, as it allows the researcher to identify and interpret key patterns and emerging themes from qualitative data (Saldaña, 2021; Yin, 2009). To enhance reliability and validity, multiple verification strategies such as triangulation, member checking, and thick

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descriptions were implemented, ensuring credibility and consistency in the findings (Creswell, 2009; Goldkuhl, 2012). Additionally, this chapter discusses the conceptual framework, which aligns the study with teacher readiness, digital skill cultivation, and teaching effectiveness (Dawson, 2002; Yin, 2009). By adopting a rigorous qualitative methodology, this study ensures that its findings accurately reflect the lived experiences of Islamic education teachers and provide valuable insights into effective strategies for enhancing digital skill cultivation in Selangor's education system (Saldaña, 2021; Creswell, 2009).

Research Interview Framework: Kvale's Seven-Stage Model

This study adopts a qualitative research methodology using Kvale's Interview Model as the guiding framework to explore the digital skills of Islamic Education teachers in Selangor. The model comprises seven systematic stages: thematizing, designing, interviewing, transcribing, analyzing, verifying, and reporting (Kvale & Brinkmann, 2009). Thematizing involved defining the purpose of the study, which is to understand teachers' digital competencies, challenges, and integration practices within the context of Islamic education. The research design included purposive sampling of 9 teachers with varying levels of digital proficiency from both urban and rural schools (Creswell, 2014). Semi-structured interviews were conducted face-to-face to allow for depth and flexibility in responses (Bryman, 2012). All interviews were audio-recorded, transcribed verbatim, and thematically analyzed using coding techniques aligned with the TPACK and SAMR frameworks (Mishra & Koehler, 2006; Puentedura, 2013). Verifying was done through member checking and triangulation with observation and document analysis to ensure trustworthiness (Lincoln & Guba, 1985). Finally, findings were reported in alignment with the research objectives to present a holistic picture of digital skill integration among Islamic Education teachers in Selangor.

Finding and Thematic Analysis on the Cultivation of Digital Skills

This section presents study findings obtained from face-to-face interviews and observations of nine Islamic Education teachers in Selangor. These findings were analyzed using thematic analysis, in line with the TPACK conceptual framework and SAMR model. The results of this study provide an overview of the level of digital skills development in teaching and learning, the challenges faced, and the strategies used by teachers. These findings also strengthen the understanding of teacher readiness, institutional support, and the effectiveness of technology in improving students' learning experiences. This study aims to explore the cultivation of digital skills among Islamic Education teachers in Selangor. Based on face-to-face interviews and classroom observations conducted with nine teachers, several key findings have been identified. Thematic analysis was employed to recognize emerging patterns in the collected data. Five main themes emerged: teachers' readiness, types of technology used, challenges in cultivating digital skills, institutional support, and strategies for strengthening digital skills. The following sections elaborate on these themes (Azman et al., 2024; Nilsson, 2024).

1. Teachers' Readiness in Using Technology

Findings indicate that teachers' readiness to adopt digital technology varies. A majority of teachers have incorporated technology into their teaching, though mostly at a basic level, using tools like PowerPoint, Canva, YouTube, and Kahoot. However, some teachers lack confidence and require further training and support to enhance their digital competencies (Kumaidi et al., 2024).

Teacher A: "I frequently use PowerPoint and YouTube in my classes, but I still feel that I have a lot to learn to make my teaching more interactive."

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Teacher I: "I haven't used much technology because I'm not very proficient and worry it might disrupt my teaching."

According to the TPACK framework, teachers' readiness depends on their Technological Knowledge (TK)—how well they understand technology before applying it to instruction (Nilsson, 2024). In the SAMR model, most teachers are still at the Substitution and Augmentation levels, where technology is merely replacing traditional methods without significantly transforming pedagogy (Zhang & Zhou, 2023).

2. Types of Technology Used in Teaching

The study found that teachers use various digital applications and platforms in their teaching. The most commonly used tools include Google Classroom, Microsoft PowerPoint, Quizizz, Kahoot, and YouTube. While these tools enhance students' understanding and engagement, their use remains primarily focused on content delivery (Azman et al., 2024).

Teacher B: "I use YouTube to show educational videos related to the subject so students can have a clearer understanding."

Teacher C: "Quizizz and Kahoot are very useful for review sessions. Students are more engaged because of the game-based format."

From a TPACK perspective, this demonstrates Technological Pedagogical Knowledge (TPK), where teachers understand how technology supports teaching methods. However, their practice has not yet reached the Modification and Redefinition levels in the SAMR model, where technology fully transforms instruction (Goldkuhl, 2012; Zhang & Zhou, 2023).

3. Challenges in Cultivating Digital Skills

Despite efforts to integrate technology, teachers face multiple challenges in cultivating digital skills. The primary challenges include lack of professional training, infrastructure limitations, heavy workload, and inadequate institutional support (Kumaidi et al., 2024).

Teacher D: "Teachers already have a high workload, and preparing digital materials requires even more time."

Teacher E: "The internet at school is slow, so using Google Classroom is difficult."
In addition, some teachers resist technological integration due to work culture and personal preference, doubting the effectiveness of technology in teaching Islamic Education (Zhang & Zhou, 2023).

Teacher G: "I prefer traditional teaching methods. I worry that if students rely too much on technology, they will lose interest in traditional learning methods."

According to SAMR, this resistance results in teachers remaining at the Substitution level, where technology is merely used to replace printed materials rather than transform instruction (Yin, 2009).

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4. Institutional Support and School Policies

Institutional support for digital skill cultivation remains inconsistent. While some schools provide training and access to digital tools, many teachers report that such training is limited and unsystematic (Azman et al., 2024).

Teacher F: "My school organized a technology course for teachers, but it was only held once a year."

Teacher H: "We have a computer lab, but it's rarely used because of frequent technical issues."

According to the TPACK framework, institutional support is essential for enhancing Technological Content Knowledge (TCK)—helping teachers integrate technology effectively into their subject matter (Nilsson, 2024). However, the lack of continuous professional development hinders the widespread cultivation of digital skills (Zhang & Zhou, 2023).

5. Strategies to Strengthen Teachers' Digital Skills

To address these challenges, participants suggested several strategies for strengthening digital skill cultivation among Islamic Education teachers. Key recommendations include continuous large-scale training, mentorship programs, the development of Islamic digital learning modules, and greater involvement from schools and government bodies (Kumaidi et al., 2024).

Teacher A: "Digital training should be conducted more frequently, not just once a year."
Teacher C: "Schools should establish teacher learning communities where we can share knowledge and experiences."

Teacher E: "If we had dedicated technology mentors among teachers, more of us would feel confident using technology."

In terms of SAMR, these strategies could help teachers move from Augmentation to Modification, where technology is no longer just a supplementary tool but actively reshapes instructional methods (Goldkuhl, 2012).

This study found that while Islamic Education teachers in Selangor are becoming more receptive to digital technology, they still face challenges related to training, infrastructure, and institutional support (Azman et al., 2024). With the right strategies, including more structured practical training, teacher learning communities, and the development of Islamic digital resources, the cultivation of digital skills can be significantly enhanced (Nilsson, 2024; Zhang & Zhou, 2023).

Discussion and Conclusion

This study aims to explore the cultivation of digital skills among Islamic Education teachers in Selangor. Based on face-to-face interviews and classroom observations conducted with nine teachers, several key findings have been identified. Thematic analysis was employed to recognize emerging patterns in the collected data. Five main themes emerged: teachers' readiness, types of technology used, challenges in cultivating digital skills, institutional support, and strategies for strengthening digital skills. The following sections elaborate on these themes (Azman et al., 2024; Nilsson, 2024).

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Discussion

The findings of this study highlight the persistent challenges and opportunities in cultivating digital skills among Islamic Education teachers. While many teachers have begun integrating technology into their pedagogical practices, most remain at the Substitution and Augmentation stages of the SAMR model, where technology is primarily used as a replacement for traditional methods rather than as a tool for transforming instruction (Zhang & Zhou, 2023).

To address these challenges, this study introduces the Model for Integrating Digital Competencies in Islamic Education Teachers (MIKD-GPI), which is structured around three primary components: Training and Technological Mastery, Institutional Support and Infrastructure, and Digital Pedagogical Transformation. This model is rooted in the TPACK framework, ensuring that teachers develop Technological Pedagogical Content Knowledge (TPCK) to effectively integrate technology into their instruction (Nilsson, 2024).

1. Training and Technological Mastery The study identified a significant gap in digital training opportunities for teachers. Many participants expressed the need for structured professional development programs that focus on hands-on digital training, mentor-based learning, and digital learning communities (Kumaidi et al., 2024). The proposed model emphasizes the importance of scalable and continuous digital skill-building programs to enhance teachers' technological proficiency, enabling them to move beyond basic technological applications.

2. Institutional Support and Infrastructure Another major challenge identified was the lack of access to digital tools and stable internet connections in schools, which hindered effective technology adoption in teaching and learning (Azman et al., 2024). The MIKD-GPI model calls for improved institutional support, including providing dedicated technical support teams, government-driven digital transformation initiatives, and infrastructure improvements to ensure seamless technology integration (Goldkuhl, 2012).

3. Digital Pedagogical Transformation Findings also revealed that while teachers were willing to integrate technology, they lacked a structured framework for doing so effectively. Many teachers utilized digital tools primarily for content delivery, without significantly altering their teaching methodologies (Zhang & Zhou, 2023). The MIKD-GPI model aligns with the SAMR framework, guiding teachers towards Modification and Redefinition stages, where technology enables them to create student-centered, interactive, and adaptive learning environments (Yin, 2009). By addressing these key areas, the MIKD-GPI model provides a systematic approach to bridging the digital skill gaps among Islamic Education teachers. Through targeted training, structured institutional support, and a pedagogical transformation approach, this model fosters a more sustainable digital culture in Islamic Education classrooms.

Conclusion

This study underscores the urgent need for a structured approach to cultivating digital competencies among Islamic Education teachers in Selangor. The findings reveal that while technology use is increasing, the depth of integration remains limited, primarily due to insufficient training, infrastructure gaps, and a lack of structured pedagogical transformation strategies (Azman et al., 2024; Nilsson, 2024). The introduction of the MIKD-GPI model serves as a comprehensive solution, addressing these limitations through a tripartite framework focused on training, institutional support, and pedagogical transformation (Kumaidi et al., 2024). By leveraging the TPACK and SAMR models, the MIKD-GPI framework empowers teachers to move beyond the mere adoption of digital tools to a more transformative and

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pedagogically sound integration of technology (Zhang & Zhou, 2023). This shift is essential in ensuring that Islamic Education remains relevant and effective in today's rapidly evolving digital landscape. Future research should focus on testing the effectiveness of the MIKD-GPI model in diverse educational settings, evaluating its impact on teacher competencies, student engagement, and overall learning outcomes. Additionally, longitudinal studies should be conducted to assess the sustainability and scalability of the proposed framework in broader Islamic Education contexts.

In conclusion, while challenges in cultivating digital competencies persist, this study provides a viable, research-driven framework for addressing these gaps. By implementing MIKD-GPI, stakeholders in Islamic Education—including policymakers, school administrators, and educators—can work towards a more digitally empowered, pedagogically innovative, and technologically resilient teaching workforce.

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