

TEACHERS' EXPERIENCES IN INTEGRATING INFORMATION TECHNOLOGY INTO LEARNING ACTIVITIES: A CASE STUDY OF SMA AL ITTIHADYAH PKL MASYHUR MEDAN, INDONESIA

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Abstract: *The integration of information technology (it) in senior high schools has significantly transformed the ways teachers plan, implement, and evaluate the learning process. The use of it not only influences instructional strategies but also requires a shift in teachers' roles from information transmitters to learning facilitators. Numerous studies indicate that high school teachers generally hold positive attitudes toward the integration of it in teaching and learning. However, its implementation continues to face various challenges, including limited technological infrastructure, insufficient digital competence among teachers, and a lack of sustained institutional support and school policies. Qualitative studies and survey-based research conducted in senior high schools in indonesia and other countries reveal that it integration enhances learning interactivity, expands access to learning resources, and increases students' motivation and engagement. Nevertheless, the utilization of it at the high school level remains largely basic, such as the use of digital presentations and online information searches, and has not yet been optimally directed toward innovative, collaborative, and student-centered learning practices. Based on these findings, this article presents a comprehensive literature review and proposes a conceptual model of teachers' experiences in integrating it into classroom instruction. The proposed model is expected to serve as a relevant and applicable framework for strengthening it-based teaching practices at sma al ittiyadiyah pkl masyhur medan, particularly in efforts to enhance instructional quality and teacher professionalism in the digital era.*

Keywords: *Information Technology Integration; Teachers' Experiences*

INTRODUCTION

The rapid advancement of information technology (IT), aligned with Indonesia's *Merdeka Belajar* policy, has significantly influenced instructional practices in senior high schools. Schools are increasingly encouraged to integrate digital platforms, learning management

systems (LMS), and interactive media to enhance learning flexibility and promote 21st-century competencies, including digital literacy, creativity, and critical thinking (Prestridge, 2017).

Previous studies have demonstrated that IT integration positively affects instructional management, teacher–student interaction, and access to diverse learning resources (Wallace et al., 2022). Moreover, IT-supported learning environments facilitate student-centered approaches, enabling more interactive, contextual, and collaborative learning experiences.

Despite these advantages, IT integration in many Indonesian senior high schools remains limited and uneven. Challenges related to infrastructure availability, internet connectivity, and insufficient pedagogical training persist, resulting in technology use that is often supplementary rather than transformative (Burke et al., 2017). In addition, traditional teacher-centered pedagogies continue to dominate classroom practices, constraining the potential of IT to support higher-order thinking and learner autonomy (Joshi et al., 2024).

Given these conditions, this study aims to explore teachers' experiences in integrating IT at SMA Al Ittihadiyah PKL Masyhur Medan. Specifically, it examines teachers' perceptions of IT, forms of utilization, challenges encountered, and strategies employed to overcome implementation barriers. The findings are expected to contribute empirical insights to the discourse on effective IT integration in secondary education, particularly within Islamic school contexts.

LITERATURE REVIEW

Existing literature indicates that teachers generally exhibit positive attitudes toward IT integration, perceiving it as a means to enhance student engagement, instructional interactivity, and access to up-to-date learning resources (Sunartiningsih et al., 2025). Studies conducted in Indonesian senior high schools report that IT utilization supports dynamic, student-oriented learning environments, particularly in subjects such as history, English, and Islamic Religious Education (Joshi et al., 2024).

International research similarly highlights IT's role in facilitating collaborative learning, project-based instruction, and extended teacher–student interaction beyond classroom settings (Jamilano, 2025). However, positive perceptions alone do not guarantee effective implementation. Institutional support, infrastructure availability, and teachers' digital pedagogical competence significantly influence the depth and sustainability of IT integration (Tondeur et al., 2017).

IT integration has been associated with improved instructional quality, flexible learning interactions, and enhanced classroom management through LMS-based platforms such as Google Classroom (Anderson & Putman, 2020). Furthermore, IT-supported learning fosters students' digital literacy, critical thinking, creativity, and collaboration skills (Rice, 2021).

Nevertheless, several challenges persist, including limited infrastructure, uneven internet access, varying levels of teacher digital competence, and student-related factors such as digital distractions and unequal access to devices at home (Prestridge, 2017; Netthey et al., 2024). Analyses based on Bloom's Digital Taxonomy reveal that IT use in secondary education predominantly occurs at lower cognitive levels, with limited engagement in higher-order learning activities (Wohlfart & Wagner, 2024).

This study is grounded in three complementary frameworks:

1. **Technological Pedagogical Content Knowledge (TPACK)**, which emphasizes the integration of technological, pedagogical, and content knowledge;
2. **Technology Acceptance Model (TAM)**, focusing on perceived usefulness and ease of use as determinants of technology adoption; and
3. **Bloom's Digital Taxonomy**, which categorizes technology-supported learning activities across cognitive levels.

These frameworks collectively provide an analytical lens to examine teachers' perceptions, acceptance, and instructional use of IT in classroom practices (Wallace et al., 2022).

METHOD

This study adopts a qualitative single case study design to explore teachers' experiences in integrating IT at SMA Al Ittihadiyah PKL Masyhur Medan. Data were collected through in-depth interviews with teachers from various subject areas, classroom observations, and document analysis, including lesson plans and digital learning artifacts (Sunartiningsih et al., 2025).

Data analysis followed the Miles and Huberman model, encompassing data reduction, data display, and conclusion drawing to identify recurring themes and patterns related to IT integration practices (Tondeur et al., 2017).

RESULT AND DISCUSSION

The findings indicate that younger teachers and those actively engaged in professional development are more adaptive in utilizing digital media, including LMS platforms, online quizzes, instructional videos, and interactive presentations. In contrast, some senior teachers primarily employ IT at a basic level, such as using PowerPoint and online material searches.

Teachers reported that IT integration enhances student motivation, engagement, and instructional clarity while facilitating online task management and assessment. However, persistent challenges related to infrastructure limitations, time constraints, and disparities in digital competence among teachers remain evident. These findings align with previous studies emphasizing the importance of continuous training, mentoring, and institutional support in fostering effective IT integration (Sunartiningsih et al., 2025).

CONCLUSION

IT integration in senior high school education holds significant potential to enhance instructional quality and student learning outcomes. However, its effectiveness depends on teachers' competencies, experiences, and institutional readiness. Sustained and differentiated professional development, supported by adequate infrastructure and school policies, is essential to promote pedagogically meaningful and ethical technology use. When these conditions are met, IT can serve as a powerful catalyst for innovative, student-centered learning in secondary education (Rice, 2021).

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