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Teacher MIN's Perception of IT-Based Learning Innovation for Improving Achievement

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ABSTRACT

This study aims to understand the perceptions of teachers at State Islamic Elementary School in Tanggamus Regency regarding educational innovation as a tool to enhance learning outcomes and prevent students from becoming easily bored or disinterested. The study specifically focuses on identifying new teachers' perspectives on implementing both conventional and IT-based learning innovations to ensure that learning remains engaging and yields optimal results. The research employs a quantitative design through surveys. Data were collected from undergraduate and postgraduate teachers working as instructors. A survey questionnaire served as the primary data collection instrument. Data analysis was conducted using tables, diagrams, and observations. The survey results indicate that most teachers have implemented learning innovations, whether conventional or IT-based. Some teachers at Madrasah Ibtidaiyah have also adopted Internet-based learning innovations. The findings show that most teachers continuously seek out and read about media innovation in education, recognizing its importance. However, not all teachers consistently use technology-based media such as quizzes, comics, or other media in their daily activities, and some are unaware of engaging learning media like Quizizz, Wordwall, or Kahoot. Some teachers identified inadequate facilities as a significant challenge. Despite this, learning media innovations can significantly enhance the learning process, improve retention, and balance different learning styles among students.

INTRODUCTION

Student boredom is a recurring issue in the educational process, often rooted in pedagogical methods, institutional environments, and lack of learner engagement. Research shows that boredom significantly hampers student motivation and cognitive engagement, thus reducing learning outcomes (S.P.T. Utami & R. Winarni, 2023). Boredom emerges not only due to internal factors like fatigue but also due to external elements, particularly the repetitiveness of instructional strategies and perceived irrelevance of learning materials (I.G. Budasi, 2020).

In today's digital age, one proposed solution to combat boredom is the integration of information technology (IT)-based learning innovations. These innovations are designed to promote learner-centered environments that offer multimodal learning experiences. According to Wahyuningsih (2022), interactive digital modules and gamification in e-learning environments enhance student motivation, interactivity, and retention. Such tools are particularly impactful for learners with short attention spans, a common trait among younger students (S. Wahyuningsih, 2022).

Educator perceptions play a pivotal role in the successful adoption of such technological approaches. Positive teacher attitudes toward digital tools and innovations are consistently linked to increased implementation and more dynamic classroom environments (R. Chatterjee, 2024). Conversely,

resistance or inadequate digital literacy among teachers may hinder the effective use of these tools, perpetuating traditional methods that disengage students (N. Saraswati & N.M. Ratminingsih, 2020).

Teacher-centered approaches that fail to vary instructional methods or include student interests are cited as central causes of student boredom (N. Saraswati & N.M. Ratminingsih, 2020). Further, authoritarian teaching styles—those marked by either excessive strictness or overindulgence—can contribute to student stress or loss of respect, respectively, both diminishing classroom efficacy. A more balanced, empathetic, and technologically adaptive approach is recommended (F. Rijal, 2022).

Perception, conceptually, is the lens through which individuals interpret their environment and inform their actions. In education, teacher perceptions regarding technology use often dictate the extent to which innovations are applied in classrooms. Educators who perceive IT-based tools as beneficial tend to foster more engaging learning environments and demonstrate greater openness to pedagogical transformation (A.B. Saputri et al., 2024). These perceptions influence not just their willingness to adopt innovation but also how students respond to instructional stimuli.

Innovation in learning is not limited to technology alone but also encompasses varied instructional strategies, problem-based learning, collaborative activities, and project-based modules. When teachers implement methods tailored to students' learning styles and cognitive development levels, it significantly enhances engagement and outcomes (B. Baihaqi & K. Thohir, 2022). This alignment between pedagogical approach and learner need underscores the centrality of innovation to modern education.

Furthermore, the physical and infrastructural elements of the learning environment must support these pedagogical shifts. Adequate access to devices, reliable internet, and digital content are foundational to IT-based instruction. Schools that lack these resources risk exacerbating educational inequities and undermining motivation (S. Wahyuningsih, 2022).

In conclusion, to address the pervasive challenge of student boredom and enhance learning achievement, it is essential to foster positive teacher perceptions of IT-based innovation, provide adequate support and training, and ensure alignment between pedagogy, student needs, and technological capabilities. These efforts collectively contribute to a more engaging, equitable, and effective educational experience.

RESEARCH METHOD

This research adopts a descriptive quantitative survey design to systematically examine teacher perceptions regarding the application of learning innovations, particularly IT-based approaches, in elementary education. Quantitative survey research is widely employed in educational studies to capture structured responses from a population sample and to analyze patterns and correlations using statistical techniques (B. Maraza-Quispe, 2025).

The philosophical underpinning of this research aligns with post-positivism, which emphasizes measurable observations and the objective testing of hypotheses through empirical data. The survey method allows researchers to generalize findings from a sample to a larger population, ensuring both breadth and statistical reliability (I. Praptanti, 2025).

The research population consisted of teachers from two public Islamic elementary schools MIN 1 Tanggamus and MIN 2 Tanggamus in Lampung, Indonesia. These institutions were selected due to their implementation of digital learning platforms and participation in education technology initiatives. A simple random sampling technique was used to ensure that each teacher had an equal opportunity of being selected, thereby minimizing sampling bias.

Data collection was conducted using a structured questionnaire that included both closed and Likert-scale items designed to assess perceptions of learning innovation, frequency of IT integration, and perceived impact on student engagement and outcomes. The questionnaire was adapted from validated instruments used in similar research (N. Ilmiyah, 2025) and distributed digitally through

WhatsApp, a method proven effective in collecting educational data in remote or rural contexts (M.F. Salman, 2025).

Teachers were given a period of 2–4 days to complete and return the questionnaire. Data collection spanned one week, ensuring adequate response time and follow-up. In addition to surveys, supporting data were obtained through semi-structured interviews with selected respondents and observational field notes to triangulate the survey results and enhance data credibility. The analysis process followed three key stages:

1. Data Reduction: Responses were screened for completeness and consistency; irrelevant or incomplete data were excluded.
2. Data Display: Descriptive statistics such as frequencies, means, and percentages were presented to summarize perceptions and tendencies.
3. Conclusion Drawing: Correlations and cross-tabulations were used to explore relationships between teacher characteristics (e.g., teaching experience, digital literacy) and their perceptions of learning innovation.

This approach offers a holistic yet measurable insight into how teachers perceive and implement learning innovations in a real-world setting, supporting the broader discourse on effective pedagogical transformation in basic education.

RESEARCH RESULT & DISCUSSION

Teacher Involvement in ICT-Based Learning Innovation

Teacher involvement in Information and Communication Technology (ICT)-based learning innovation plays a crucial role in the successful integration of technology into educational practices. Based on a survey conducted among teachers at MIN 1 and MIN 2 Tanggamus, the majority of respondents expressed a positive attitude towards the adoption of ICT in teaching and learning processes. Their levels of engagement were categorized into four main groups: Always (SM), Often (M), Rarely (KM), and Never (TM) in terms of supporting, using, and creating technology-based learning media.

The data indicated that most teachers fell into the "Always" and "Often" categories, reflecting their proactive or moderate engagement in utilizing technology to support learning. This illustrates a growing willingness among educators to adapt to technological advancements. These teachers not only utilize digital tools such as PowerPoint presentations, educational videos, and interactive applications but also contribute to a collaborative school culture that promotes innovation among peers (B. Maraza-Quispe, 2025).

However, a small proportion of teachers were categorized as "Rarely" or "Never" engaged, highlighting several constraints affecting their participation. These included the lack of formal training, limited digital literacy, and inadequate access to necessary devices such as computers and internet connectivity. Salman and Yahaya (2025) observed similar barriers in low-resource settings, noting that while motivation among teachers remains high, access to digital tools continues to impede widespread adoption (M.F. Salman, 2025).

Teacher readiness for digital transformation extends beyond the mere use of technological tools; it also encompasses pedagogical adaptability and the ability to design responsive learning experiences aligned with 21st-century competencies. Ilmiyah, Syamsiah, and Amalia (2025) emphasized the importance of ongoing professional development in fostering digital pedagogical skills. Teachers who participate in hands-on, ICT-oriented training programs tend to show a significant improvement in the use of interactive media and the development of digital-based instructional content (N. Ilmiyah, 2025).

To enhance teacher involvement, several strategic initiatives are recommended. These include increasing access to practice-based training, offering incentives for innovative educators, and expanding infrastructure to support digital integration. With appropriate policy support and investment, teacher participation in ICT-based learning innovation can serve as a catalyst for creating more engaging, effective, and inclusive learning environments.

The Urgency of Learning Media in the Teaching and Learning Process

In the context of modern education, learning media has become an essential component of the teaching and learning process. It functions not only as a tool for information delivery but also as a critical support mechanism for improving student engagement, motivation, and understanding. Particularly at the primary education level, where students are in the early stages of cognitive development, the presence of appropriate and effective media can significantly enhance learning outcomes.

Teachers at MIN 1 and MIN 2 Tanggamus emphasized that the integration of media—whether visual, auditory, or digital—plays a strategic role in helping students grasp complex or abstract concepts. Media such as images, animations, educational games, and videos can transform passive learning into active engagement. According to Salman and Yahaya (2025), the use of interactive media significantly increases student attention and participation, especially in subjects that students usually find difficult or monotonous (M.F. Salman, 2025).

The urgency is heightened by the fact that verbal instruction alone often leads to discrepancies in students' conceptual understanding. In traditional settings, when teachers rely solely on explanations without the support of visual aids or contextual examples, students may form inaccurate mental models. Praptanti and Wahyudi (2025) note that such gaps can hinder the development of scientific reasoning and critical thinking skills, which are vital in primary education (I. Praptanti, 2025).

Furthermore, learning media serves as a bridge between theory and practice. It provides a tangible representation of theoretical knowledge, making abstract information more concrete and relatable. For instance, while teaching about the respiratory system, showing a visual animation of how the lungs work can help students develop an accurate understanding, compared to simply explaining it through words. Maraza-Quispe and Rosas-Iman (2025) highlight that immersive and multimodal learning experiences foster deeper comprehension and long-term retention of knowledge (B. Maraza-Quispe, 2025).

Beyond content delivery, learning media also plays a motivational role. Well-designed media can make lessons more interesting and enjoyable, reducing boredom and increasing enthusiasm. This is particularly important in the context of educational recovery post-COVID-19, where re-engaging students is a primary concern across educational systems worldwide.

In conclusion, the use of learning media is not merely supplementary but a pedagogical necessity. Teachers must not only have access to diverse types of media but also be trained in selecting and applying the right tools based on instructional goals and student needs. Supporting infrastructure and strategic policy implementation are also vital to ensure equitable access to these resources across all educational institutions.

Availability of Learning Media in Islamic Elementary Schools

The availability of learning media in Islamic elementary schools (Madrasah Ibtidaiyah) plays a pivotal role in shaping the quality of instructional delivery and student learning experiences. However, the current study conducted at MIN 1 and MIN 2 Tanggamus revealed that access to learning media in these institutions remains limited. Many classrooms still rely heavily on

traditional, lecture-based teaching without the consistent support of visual or digital media. This condition poses a significant challenge, particularly for younger learners who benefit more from concrete, sensory-rich instructional methods.

Limited media availability often stems from several factors, including insufficient funding, lack of infrastructure, and inadequate teacher training in media development. Teachers are frequently left with few resources and must rely solely on verbal explanations. While some educators attempt to improvise using objects found in the surrounding environment, the lack of structured, content-aligned media hampers the depth and clarity of student understanding.Wahyudi (2025) emphasize that such limitations can result in conceptual misunderstandings and reduce student engagement, particularly in abstract subjects like science and mathematics (Wahyudi, 2025).

Furthermore, the unavailability of learning media in madrasah settings is closely linked to broader systemic issues. These include limited integration of digital technology in rural or underfunded schools and the absence of targeted government support for media acquisition. Salman and Yahaya (2025) point out that while interactive digital manuals and multimedia tools have shown great potential in enhancing academic engagement, their impact is minimized if they are not made universally accessible (M.F. Salman, 2025).

The gap in media availability also highlights disparities between urban and rural educational settings. Urban schools often have greater access to projectors, computers, and internet connectivity, whereas rural madrasahs face constraints in even acquiring basic visual aids. Ilmiyah, Syamsiah, and Amalia (2025) argue that to bridge this gap, there must be not only policy-level interventions but also community-based efforts that mobilize local resources to produce simple yet effective teaching media (N. Ilmiyah, 2025).

In light of these findings, there is a pressing need to enhance the availability of media through collaborative initiatives. Schools should be supported with budget allocations specifically for media procurement and teacher training in low-tech and no-tech instructional tools. Equipping madrasahs with at least basic media kits—such as charts, physical models, or multimedia storage devices—could significantly enhance the teaching-learning process and help align it with modern pedagogical standards.

In summary, the availability of learning media in madrasah environments remains a critical concern that requires systematic attention. Empowering teachers with both tools and the know-how to develop or adapt instructional media is essential to ensure equitable and quality education for all students.

Teachers' Knowledge in Developing Instructional Media

Teacher knowledge in developing instructional media is a critical component of effective classroom practice, especially in environments where standardized or ready-made media are scarce. At MIN 1 and MIN 2 Tanggamus, while many teachers demonstrate a strong understanding of the value of media in supporting learning, there remains significant variability in their ability to create or adapt instructional materials.

Teachers acknowledged that creating effective media requires more than creativity—it involves understanding how to align media with educational goals across cognitive, affective, and psychomotor domains. For instance, a visual aid should not only illustrate a concept but also support student motivation and encourage hands-on interaction. Ilmiyah, Syamsiah, and Amalia (2025) assert that teachers must be equipped with pedagogical design principles that help them transform everyday objects or local materials into meaningful learning tools. This kind of skillset is particularly vital in resource-constrained settings (N. Ilmiyah, 2025).

However, the study also revealed that many teachers have not received sufficient training in instructional media development. Their experiences are often limited to replicating basic templates, such as PowerPoint slides or printed images, without deeper engagement in the design process. According to Praptanti and Wahyudi (2025), such surface-level practices limit the pedagogical effectiveness of media, making it difficult to address diverse learning needs.

Developing instructional media requires teachers to think systematically: they must identify learning objectives, understand student needs, choose the right media format, and evaluate its effectiveness in real-time classroom contexts. Salman and Yahaya (2025) emphasize that when teachers are involved in media creation, they are more likely to adopt reflective teaching practices and make data-driven instructional adjustments.

Encouragingly, some teachers at the surveyed madrasahs demonstrated initiative in producing contextualized media using everyday materials such as charts, recycled objects, or even mobile phone applications. This reflects a growing awareness of the need for local relevance in instructional content. Teachers also expressed interest in participating in professional development programs that focus specifically on media design and technological integration.

In conclusion, enhancing teacher competence in developing instructional media is essential for educational transformation. This requires structured training, peer collaboration, and access to instructional design resources. Equipping teachers with the ability to create tailored, context-sensitive media can empower them to become not just facilitators of content but also designers of meaningful learning experiences.

Instructional Media as a Tool to Concretize Learning Objectives

Instructional media serves a fundamental function in the learning process by helping to transform abstract content into concrete, understandable experiences. Particularly in primary education, where students' cognitive abilities are still developing, the use of tangible and visual aids is vital for bridging the gap between theory and practical understanding. At MIN 1 and MIN 2 Tanggamus, teachers recognize that media can be instrumental in achieving intended learning outcomes more effectively.

Abstract educational concepts—such as the water cycle, the human respiratory system, or mathematical formulas—can be difficult for young learners to grasp through verbal explanation alone. By incorporating multimedia such as diagrams, videos, physical models, and simulations, educators can provide real-world visualizations that reinforce understanding. Maraza-Quispe and Rosas-Iman (2025) highlight that immersive, multimodal environments facilitate deeper cognitive processing and knowledge retention among students (B. Maraza-Quispe, 2025).

The ability of instructional media to concretize learning goals also contributes to inclusive education by accommodating diverse learning styles. While some students may learn effectively through auditory explanations, others require visual or kinesthetic reinforcement. Saputri et al (2025) assert that well-designed media can meet these varied preferences and thus create more equitable and accessible learning experiences (A.B. Saputri et al., 2024).

Teachers in the study emphasized that using simple, portable media—such as flashcards, posters, animations, or mobile applications—makes it easier to integrate learning tools into daily instruction, even in resource-limited settings. These tools do not necessarily need to be expensive or technologically advanced to be effective. What matters is how they are aligned with instructional goals and the way they are used to make content meaningful and memorable.

Moreover, media can serve as a continuous feedback mechanism. For example, when students interact with visual media during the lesson, their responses can provide teachers with immediate insights into which parts of the material are well-understood and which require clarification. Akbar

and Silaban (2025) affirm that visual learning aids stimulate curiosity and encourage students to ask questions, fostering a more interactive and reflective learning environment (Akbar & Silaban, 2025).

In conclusion, instructional media is not a supplementary element but a strategic asset in achieving educational objectives. It supports the concretization of abstract ideas, enhances engagement, and caters to multiple intelligences. Therefore, equipping educators with both the tools and the competencies to select and apply appropriate media is essential to ensuring meaningful learning outcomes.

Instructional Media as a Tool to Facilitate the Teaching Process

Instructional media not only enhances student engagement but also significantly simplifies the teaching process for educators. In the modern classroom, particularly in resource-constrained environments such as Islamic elementary schools, the ability to deliver content effectively and efficiently is greatly supported by the integration of appropriate media.

Teachers at MIN 1 and MIN 2 Tanggamus reported that instructional media acts as a catalyst for smoother lesson delivery. It helps structure learning sessions, maintain student attention, and reduce the cognitive load of the teacher. For instance, pre-prepared media such as animated videos, interactive slides, and visual aids allow teachers to focus more on classroom management and student interaction rather than solely on content explanation. Salman and Yahaya (2025) found that the use of interactive digital manuals enhances teacher confidence and classroom control by providing a structured flow of instructional content (M.F. Salman, 2025).

Moreover, instructional media reduces redundancy and enhances clarity in concept delivery. Instead of repeatedly explaining the same topic to different student groups, teachers can use standardized media content that ensures consistency across sessions. This also helps in managing time effectively and increases instructional efficiency. As noted by Ilmiyah, Syamsiah, and Amalia (2025), teaching aids such as diagrams, simulations, and infographics not only support student comprehension but also ease the teaching burden by presenting information visually and dynamically (N. Ilmiyah, 2025).

In addition, the strategic use of media fosters teacher creativity and adaptability. When educators are equipped with a variety of tools, they are more likely to design diverse instructional strategies that cater to varying learning preferences. Praptanti and Wahyudi (2025) emphasize that media-supported instruction allows teachers to transition from a didactic model to a more facilitative, student-centered approach. This shift is crucial in fostering active learning and deeper engagement, especially among younger learners (I. Praptanti, 2025).

Importantly, media can serve as an embedded formative assessment tool. Teachers can gauge understanding through interactive quizzes or media-based exercises, enabling them to adjust instruction in real-time. This feedback loop supports continuous learning and reinforces student outcomes without the need for formal testing.

Despite its benefits, some challenges remain, particularly regarding access to technology and technical skills. Nevertheless, even low-tech media, such as flipcharts, posters, or printed visuals, can substantially improve lesson delivery if designed and used thoughtfully. Therefore, investment in training and infrastructure is essential to empower educators to fully leverage the potential of instructional media.

In summary, instructional media facilitates teaching by enhancing efficiency, improving clarity, fostering interactivity, and supporting differentiated instruction. Its integration into daily pedagogical practice is not a luxury but a practical necessity in delivering quality education.

CONCLUSION

The findings of this study underscore the critical role of teacher perception in the successful implementation of learning innovations, particularly those based on information technology (IT). A positive attitude among teachers toward pedagogical change constitutes a foundational asset for educational transformation. In an era marked by rapid technological advancement and increasing student diversity, teachers are expected not only to deliver content but to act as adaptive facilitators who can tailor learning experiences to meet varied cognitive and affective student needs. This shift requires more than technical skills it necessitates an open mindset, a willingness to embrace change, and continuous professional development.

A central challenge in the contemporary classroom is the heterogeneity of student learning styles and abilities. To address this, learning must be made more engaging, differentiated, and student-centered. The use of media-rich, IT-supported instructional approaches has proven effective in fostering such environments. When teachers perceive these innovations positively, they are more likely to adopt them actively, which in turn enhances student motivation and learning outcomes. This aligns with current educational theories that advocate for constructivist and socio-cultural approaches to learning, where technology acts as a bridge between individual learning potential and classroom resources.

Furthermore, the integration of IT in teaching is not merely a technical adaptation but a pedagogical imperative. In preparing students for the demands of the 21st century, educators must themselves be proficient in digital literacy. By embracing IT-based learning innovation, teachers contribute to the development of intelligent, adaptive, and technologically competent future citizens. The findings also highlight the importance of institutional and policy-level support to ensure access to infrastructure, training, and media resources. Without such support, even the most optimistic teachers may face limitations in translating their perceptions into practice.

In conclusion, the study affirms that teacher readiness, both attitudinal and professional, is essential to drive educational innovation. Positive perceptions toward IT-based learning innovations must be nurtured through capacity-building efforts, reflective practice, and a school culture that values innovation. When adequately supported, teachers become key agents of change, capable of designing inclusive, effective, and future-oriented learning environments.

REFERENCES

A.B. Saputri et al. (2024). The Effect of Implementing Differentiated Learning on Motivation to Learn Economics: Student Perceptions. *Economic Education Analysis Journal*. https://journal.unnes.ac.id/journals/eeaj/article/download/2052/70

Akbar, M. C., & Silaban, Y. H. (2025). An Integration of Emotional Intelligence and Leadership Development in the Educational Process. *Jurnal Multidisiplin Sahombu*. https://ejournal.seaninstitute.or.id/index.php/JMS/article/view/6574

B. Baihaqi & K. Thohir. (2022). Adaptation Transformation of Religious Education in Islamic Schools: Learning Innovation in SMP IT Al-Fityah and MTs Al-Munawwarah. *QALAMUNA: Jurnal Pendidikan, Sosial Dan Agama*. https://ejournal.insuriponorogo.ac.id/index.php/qalamuna/article/download/3669/1961

B. Maraza-Quispe, V. H. R.-I. (2025). A Mixed-Methods Approach to Determine the Impact of Immersive Learning on Achieving Technological Competencies in Basic Education. *International Journal of Information and Education Technology*. https://www.ijiet.org/vol15/IJIET-V15N4-2290.pdf

F. Rijal, B. N. & I. A. S. (2022). Islamic Religious Education Learning Innovation at the MTsN Model Banda Aceh and the MTsN Model Gandapura Bireuen. *Al-Ishlah: Jurnal Pendidikan*. http://journal.staihubbulwathan.id/index.php/alishlah/article/download/1930/869

I. Praptanti, W. W. (2025). Student Sentiment and Academic Achievement in Indonesian Language Learning. *QALAMUNA: Jurnal Pendidikan, Sosial Dan Agama*. https://ejournal.insuriponorogo.ac.id/index.php/qalamuna/article/download/7031/4016

I.G. Budasi, N. M. R., K. Agustini. (2020). Power Point Game, Motivation, Achievement: The Impact and Students' Perception. *International Journal of Instruction*. https://files.eric.ed.gov/fulltext/EJ1270689.pdf

M.F. Salman, L. A. Y. (2025). Enhancing Academic Engagement through an Interactive Digital Manual. *Pengabdian: Jurnal Ilmiah*. https://journal.ypidathu.or.id/index.php/abdimas/article/download/1866/1544

N. Ilmiyah, K. S., A. H. Amalia. (2025). Curriculum Development Needs Assessment for Islamic Religious Education in Junior High. *Jejak Digital: Jurnal Pendidikan Islam*. http://indojurnal.com/index.php/jejakdigital/article/download/37/32

N. Saraswati & N.M. Ratminingsih. (2020). Students' and Teachers' Perception on Reward in Online English Teaching Context. *Journal of Education Research and Evaluation*. https://ejournal.undiksha.ac.id/index.php/JERE/article/download/27923/16439

R. Chatterjee. (2024). Teacher Perception of Blended Learning on Student Engagement in the Post-Pandemic Era. *Educational Leadership Review of Doctoral Research*. https://www.icpel.org/uploads/1/5/6/2/15622000/elrdr_fall_2024_volume_12.pdf#page=59

S. Wahyuningsih. (2022). Developing Android-Based Interactive E-Modules on Trigonometry to Enhance the Learning Motivation of Students. *International Journal of Interactive Mobile Technologies*. https://www.researchgate.net/publication/358189323

S.P.T. Utami & R. Winarni. (2023). Utilization of Artificial Intelligence Technology in an Academic Writing Class: How do Indonesian Students Perceive? *Contemporary Educational Technology*. https://files.eric.ed.gov/fulltext/EJ1406915.pdf

Wahyudi, W. (2025). Building Lecturer Job Satisfaction: Synergy of Leadership Style and Compensation Strategy. *Jurnal Mahasiswa Humanis*. https://ojs.pseb.or.id/index.php/jmh/article/view/1442