

Examining technology readiness among senior high school teachers: The role of proactive school management

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ABSTRACT

Teachers play a pivotal role in integrating technology into education. Proactive school management can significantly enhance teachers' ability to utilize technology, making the teaching and learning process more creative, modern, and aligned with contemporary developments. This study investigates the relationship between teachers' technology usage and their technology readiness, which refers to an individual's propensity to accept and use new technologies for daily needs. A non-experimental quantitative research design with a descriptive method was employed. Data collection was conducted through an online questionnaire distributed to 100 senior high school teachers in Bandung City, Indonesia. The sampling technique used was non-probability sampling, specifically snowball sampling. The instrument utilized in this study was the Technology Readiness Index, which has a high reliability score. Data were analyzed using descriptive statistics, normality tests, and the Mann-Whitney and Kruskal-Wallis tests. The findings revealed that 52% of respondents fell into the high technology readiness category, indicating that proactive school management supports teachers in being more inclined to accept and use new technologies effectively. The study highlights the importance of school leadership in fostering a positive technological environment, with implications for future teacher training programs.

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Introduction

In an ever-evolving digital era, technology readiness has become a critical aspect for educators at all levels of education, including senior high school (SMA) teachers. Education must continually adapt to the times, particularly in terms of technological preparedness, and proactive school management plays a pivotal role in facilitating these changes (Karaseva et al., 2017; Ren & Zhou, 2022). Technology has become an inseparable element of the teaching and learning process, especially with the emergence of various digital platforms that can enrich learning and enhance students' academic success (Kassa & Mekonnen, 2022; Warden et al., 2020). However, not all teachers possess adequate readiness to optimally utilize this technology. A lack of readiness can undermine the effectiveness of instruction, ultimately impacting the quality of education students receive (Rushton et al., 2023; Petko et al., 2018). As technological advancements increasingly permeate the educational landscape, the need for teachers to be well-prepared to adopt

and integrate these innovations into their pedagogical practices has never been more urgent (Rafiee & Abbasian-Naghneh, 2019).

Teachers play a crucial role in integrating technology within the educational sphere (Okhremtchouk & Sellu, 2019; Polly et al., 2023). As technology advances, educators are expected to not only keep pace but also leverage these developments to enhance their professional performance (Collado, 2024; Nzabahimana et al., 2024). This inclination to adopt new technology is referred to as technology readiness. According to Blut and Wang (2020), technology readiness refers to an individual's propensity to accept and utilize new technologies to achieve goals both in personal life and the workplace. Technology readiness comprises four key dimensions: optimism, which reflects a positive outlook on technology and the belief that it can improve control, flexibility, and efficiency in life; innovativeness, which pertains to the tendency to be an early adopter and thought leader in technology; discomfort, representing the perception of a lack of control over technology, often accompanied by feelings of being overwhelmed by it; and insecurity, which encompasses distrust in technology, stemming from skepticism regarding its reliability and concerns over potential negative consequences (Chu et al., 2021; Olechowski et al., 2020).

From a psychological perspective, teachers, as individuals, simultaneously develop perceptions, beliefs, emotions, and motivations that are either favorable or unfavorable toward technology-based products and services. These attitudes subsequently influence their tendency to adopt technology (Luo & Watts, 2023). Among the four dimensions of technology readiness, optimism and innovativeness serve as "motivators," driving an individual's readiness to adopt new technology, while discomfort and insecurity act as "inhibitors," which delay or hinder the adoption process (Howard et al., 2020). The psychological complexity underlying technology adoption highlights the importance of addressing both the positive and negative predispositions that individuals may hold toward technological integration, particularly in the educational context (Ateş et al., 2023). Understanding these factors is crucial for developing effective strategies to enhance technology readiness among teachers.

Several studies have been conducted to explore the readiness of teachers in adopting technology in today's educational environment. One such study assessed the technology readiness of primary school teachers and identified the factors influencing their level of readiness (Bentsi-Enchill, 2024). The findings indicated that the overall readiness of teachers in adopting technology fell within the moderate category, with an average score of 2.96. This suggests that while teachers were reasonably prepared for technological integration, several factors, including the extent of integration efforts, influenced their readiness to embrace technology. This study underscored the importance of addressing contextual variables that may either support or hinder teachers' technological readiness.

Another notable study examined the technology readiness of teachers in public schools and explored the demographic factors influencing their readiness (Warden et al., 2020). The study revealed that the overall technology readiness of teachers was relatively high, with specific demographic factors such as age and years of experience playing a significant role in shaping their readiness to adopt new technologies. These findings highlight the importance of considering demographic diversity when analyzing technology readiness, as individual backgrounds can significantly influence teachers' openness to integrating technology into their pedagogical practices.

Technology readiness not only encompasses the basic ability to use hardware and software but also involves a deeper understanding of how technology can seamlessly integrate into curricula and teaching strategies (Aini et al., 2024; Luo & Zou, 2023). Therefore, schools must adopt a proactive management approach to ensure that their teachers are adequately prepared for technological integration. This approach could include regular training sessions, the provision of sufficient technological infrastructure, and continuous support for teachers as they explore and implement new technologies in

their classrooms (Alasmari & Althaqafi, 2021; Paramita et al., 2021). Ensuring that teachers have the necessary resources and knowledge to integrate technology effectively is vital for enhancing educational outcomes and preparing students for a digitally-driven future (Fathurrohman et al., 2021; Mohamed et al., 2016).

By employing a proactive school management approach, educational institutions can anticipate the challenges teachers may face in adopting new technologies and provide appropriate solutions to enhance their technology readiness. Proactive management not only ensures that teachers have access to the required technology but also fosters an environment conducive to innovation and ongoing professional development (Leacock & Warrican, 2020; Mpuangnan, 2024; Sun et al., 2016). This approach benefits not only the teachers, who gain the confidence and skills needed to navigate the digital age, but also the students, who receive a more interactive, relevant, and contemporary learning experience (Badiozaman, 2021; Hasyim et al., 2024). The role of school leadership in supporting teachers' technological preparedness is thus critical for advancing educational quality in an increasingly technology-dependent world (Wibowo, 2021).

Although numerous studies have investigated the integration of technology in education, there remains a lack of research focusing on how proactive school management can enhance teachers' technology readiness. Most existing studies tend to emphasize technical and infrastructural aspects without delving deeply into the role of school management in facilitating technological preparedness among teachers. Additionally, there is a paucity of research that combines proactive management approaches with technology readiness, particularly at the senior high school level in Indonesia. This gap in the literature highlights the need for more comprehensive investigations into the managerial strategies that can effectively support technology integration in schools.

Therefore, this study aims to identify school management strategies that can improve technology readiness among senior high school teachers, analyze the impact of proactive school management on teachers' technological preparedness, and develop an effective school management model to facilitate the enhancement of technology readiness in the digital age. The findings of this research are expected to make a significant contribution to the literature on educational management, while also offering practical guidance for schools seeking to improve their teachers' technology readiness.

Method

The approach utilized in this research adopts a quantitative methodology, which emphasizes the collection and analysis of numerical data to explain phenomena and test hypotheses. The research design employed is non-experimental, wherein the influence of extraneous variables is controlled by the researcher while the impact of the independent variable is examined. Non-experimental designs are typically used when the researcher cannot manipulate the independent variable and must instead observe and measure the natural variation in variables. In this case, the extraneous variables, which could potentially confound the relationship between the independent and dependent variables, were closely monitored to ensure the integrity of the results. The sampling technique applied in this study was snowball sampling, which is a method used to identify, select, and recruit participants through a network or chain of relationships. This technique was chosen due to the large and indeterminate number of respondents, all of whom shared similar characteristics. To ensure the validity of the quantitative analysis, a total of 100 respondents were selected as the sample size, which is considered sufficient for conducting statistical analyses in quantitative research.

The measurement instrument employed in this study is the Technology Readiness Index (TRI), developed by Rojas-Méndez et al. (2017), to assess the technology readiness of the selected sample. The TRI is based on four dimensions of technology readiness: optimism, innovativeness, discomfort, and insecurity. Each of these dimensions contains a different number of items, specifically tailored to capture the varying aspects of

individuals' readiness to adopt new technology. The optimism dimension consists of 9 items, measuring a positive view of technology and the belief that it enhances control, flexibility, and efficiency in daily life. The innovativeness dimension comprises 6 items and evaluates the tendency to be an early adopter of technology and a thought leader. The discomfort dimension, containing 9 items, assesses feelings of being overwhelmed by technology and a perceived lack of control over its use. Finally, the insecurity dimension consists of 7 items and measures skepticism about the functionality of technology and concerns regarding its potential negative consequences. The TRI was administered as a self-administered questionnaire, meaning that respondents completed it independently, without researcher intervention. The Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), was used to capture respondents' levels of agreement with each statement. The scores obtained for each dimension were then averaged to determine the overall technology readiness score for each respondent (Rojas-Méndez et al., 2017).

Technology readiness, as measured by the TRI, is divided into two main categories: motivators and inhibitors, each of which encompasses two dimensions. Motivators include optimism and innovativeness, which drive an individual's readiness to adopt new technologies, while inhibitors include discomfort and insecurity, which may hinder or delay adoption. Within each category, the levels of readiness are classified into three tiers: low, moderate, and high. The mean score of all items within each dimension is calculated, and this average is used to compare the individual's level of technology readiness across the predefined categories. Based on this classification, the researcher was able to determine the respondents' levels of motivators and inhibitors. This process allowed the researcher to profile the overall technology readiness of the sample, providing valuable insights into the respondents' willingness and capacity to embrace new technologies, as conceptualized by Rojas-Méndez et al. (2017)

By utilizing this approach, the researcher was able to systematically categorize and analyze the technology readiness levels of the respondents. This method not only facilitated a comprehensive understanding of the motivational factors and inhibitors influencing technology adoption but also enabled the researcher to compare individual readiness levels against broader population trends. The use of the Technology Readiness Index, alongside the snowball sampling method, ensured that the study captured a wide range of perspectives, making the findings robust and representative of the target population.

Results

Demographic information of respondents

The respondents who participated in this study were individuals aged between 20 and 60 years, all of whom work as senior high school (SMA) teachers in Bandung, Indonesia. A total of 100 participants were included in the study, representing a diverse range of age groups, teaching experience, and professional backgrounds. Table 1 provides a detailed presentation of the demographic data and characteristics of the respondents.

The demographic data presented in Table 1 includes key characteristics of the 100 respondents who participated in the study. Of the total participants, 37% were male (n=37), while 63% were female (n=63), indicating a higher representation of female teachers in this sample. The age distribution shows that the majority of respondents (62%) fall within the 25-44 age range, followed by 21% aged 15-24, and 17% aged 45-64. In terms of educational qualifications, 74% of the respondents hold an undergraduate degree (S1), and 26% have attained a postgraduate degree (S2), suggesting that the sample is relatively well-educated.

Regarding the respondents' areas of specialization, English language teachers constituted the largest group (30%), followed by Mathematics (12%) and Bahasa Sunda (8%). Other subjects, such as Bahasa Indonesia, Biology, Physics, and Counseling, are also

represented in smaller percentages. Furthermore, 61% of the teachers have less than 10 years of teaching experience, while 25% have 10-20 years of experience, and 14% have over 20 years. The teaching locations were fairly balanced, with 53% working in public schools and 47% in private schools, reflecting a diverse representation of teaching environments within the Bandung area. This wide range of demographic characteristics offers valuable insights into the varying profiles of teachers and how these factors may influence their technology readiness.

Table 1. Demographic data of the respondents

	Category	N	Percentage (%)
Gender	Male	37	37.0
	Female	63	63.0
Age	15-24 years old	21	21.0
	25-44 years old	62	62.0
	45-64 years old	17	17.0
Education	S1 (Bachelor)	74	74.0
	S2 (Master)	26	26.0
Study Program	Indonesian Language	4	4.0
	English	30	30.0
	Sundanese	8	8.0
	Biology	4	4.0
	Guidance and Counseling	7	7.0
	Economy	2	2.0
	Physics	4	4.0
	Geography	2	2.0
	Chemistry	4	4.0
	Mathematics	12	12.0
	Islamic Education	4	4.0
	Physical education, sports and health	7	7.0
	History	4	4.0
	Arts	3	3.0
Length of Teaching	< 10 years	61	61.0
	10-20 years	25	25.0
	> 20 years	14	14.0
Place of Teaching	Public school	53	53.0
	Private School	47	47.0

Teachers' technology readiness

The overall depiction of technology readiness dimensions is presented through the average scores of each dimension. Technology readiness describes an individual's tendency to accept and utilize new technologies to achieve their goals in daily life. In this study, the technology readiness of senior high school teachers in Bandung was measured and is visually represented in [Figure 1](#). The category breakdown of technology readiness was determined by first converting the scores for the dimensions of *discomfort* and *insecurity* into positive scores. The results revealed that a majority of the respondents, 52%, fall into the high technology readiness category. This indicates that more than half

of the teachers demonstrate a strong inclination to embrace and utilize new technologies to achieve their professional objectives. For these senior high school teachers in Bandung, this reflects a significant readiness to adopt technological tools and innovations in their teaching practices.

Conversely, 48% of the respondents were classified in the moderate technology readiness category. This suggests that while these teachers may exhibit a willingness to adopt new technologies, there are certain factors that may require attention, which could potentially influence their readiness levels. These factors might include limited resources, insufficient training, or concerns related to the challenges of integrating technology into the classroom. Overall, while the majority of teachers show high readiness, a considerable portion remains in the moderate range, indicating room for improvement in fostering a fully technology-ready teaching workforce.

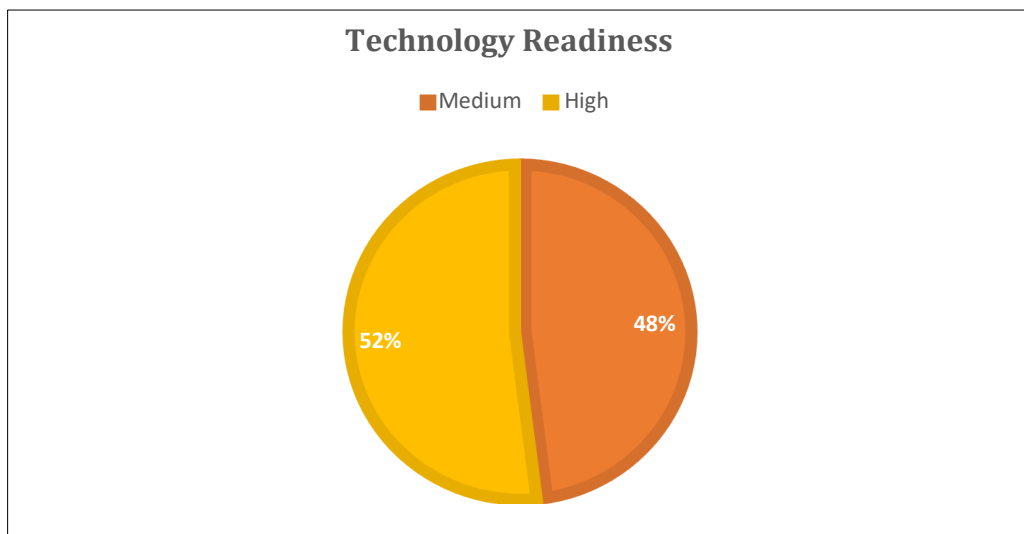


Figure 1. Teachers' Technology Readiness

Technology readiness consists of two main aspects: motivators and inhibitors. The motivator category refers to the factors that encourage individuals to adopt and embrace new technology, whereas the inhibitor category indicates an individual's tendency to delay or avoid adopting new technology (Rojas-Méndez et al., 2017). Figure 2 illustrates the technology readiness of senior high school teachers in Bandung from the perspective of motivators.

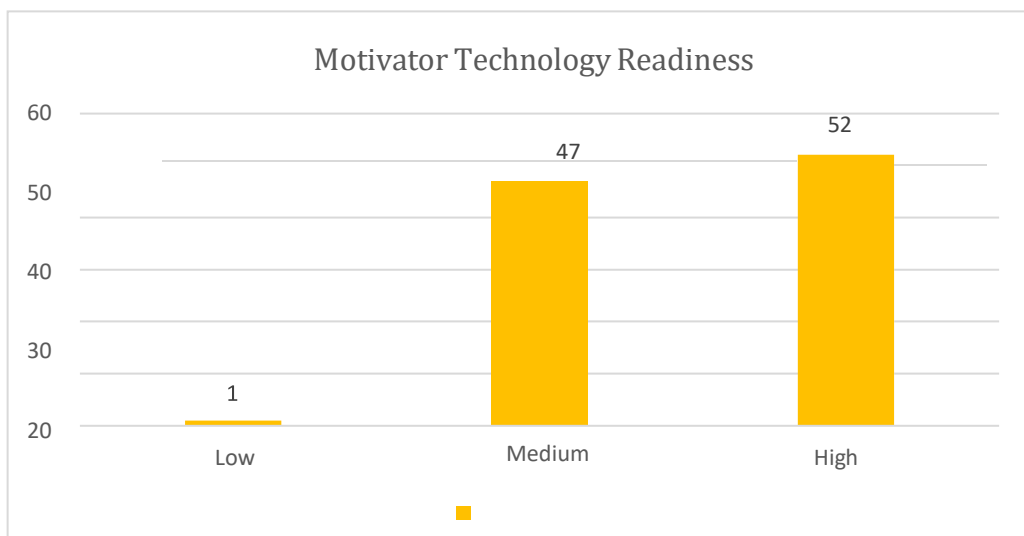


Figure 2. Motivator aspect

As shown in Figure 2, 52 respondents (52%) are categorized as having high motivators, indicating a strong confidence and readiness to adopt new technology in their teaching practices. These individuals are characterized by a positive outlook toward technology, believing it can improve their professional performance and increase efficiency. Meanwhile, 47 respondents (47%) fall into the moderate category, meaning they show a moderate inclination toward adopting new technology, but their readiness may be influenced by other factors such as resource availability or training. Lastly, only 1 respondent (1%) is categorized as having low motivators, meaning they are unlikely to adopt new technologies or have minimal interest in integrating technology into their daily teaching activities. These findings highlight a significant proportion of teachers who are ready to embrace technological advancements in education.

The level of technology readiness inhibitors among the respondents is presented in Figure 3. Fifty respondents (50%) fall within the moderate inhibitor category, suggesting that while these individuals may adopt new technology, they are likely to experience some hesitation or delay due to various factors. These factors could include concerns about the complexity of technology, lack of training, or uncertainty about the long-term benefits of using technology. Meanwhile, 49 respondents (49%) are categorized as having high inhibitors, meaning they are more likely to delay or avoid adopting new technology altogether, potentially due to discomfort or insecurity regarding the use of technology. Similar to the motivator category, only 1 respondent (1%) shows low inhibitors, meaning they are less likely to experience barriers in adopting new technology. This balance between motivators and inhibitors suggests a mixed readiness among the teachers in Bandung, where both confidence and hesitation toward technology coexist.

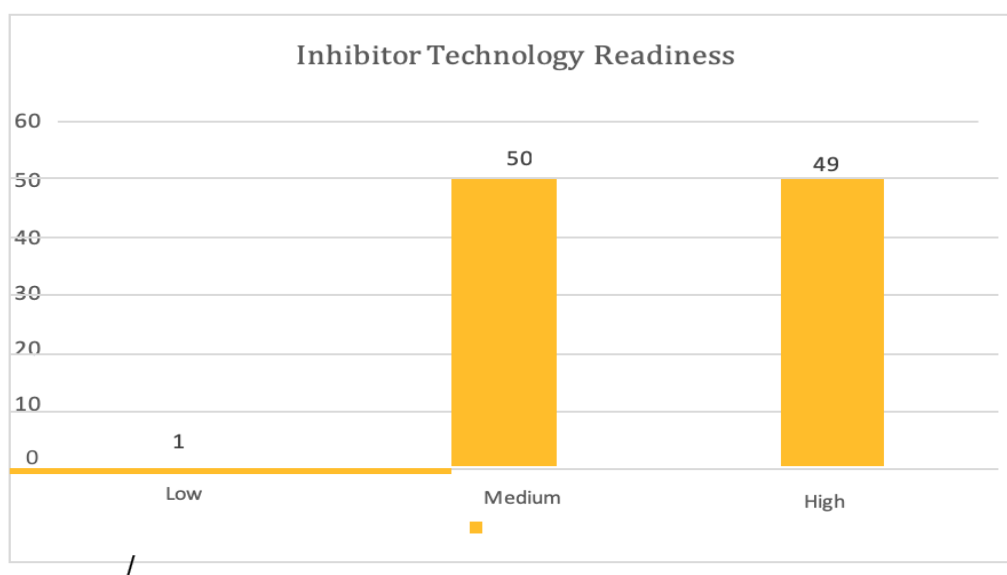


Figure 3. Inhibitor technology readiness

Figure 4 presents a comparative analysis of the average scores for the motivator and inhibitor categories in technology readiness. The motivator category, which reflects positive attitudes toward adopting new technology, has an average score of 3.79. This score suggests that a significant portion of the respondents feel confident and motivated to integrate technology into their teaching practices. It reflects optimism and innovativeness—key dimensions of technology readiness that drive adoption by encouraging teachers to view technology as a beneficial and essential tool in their professional environment. In contrast, the inhibitor category, representing the barriers or hesitations that might prevent technology adoption, records a slightly lower but comparable average score of 3.77. Although this score is still in the moderate range, it signals that many respondents experience concerns or discomfort related to technology,

such as insecurity about its use or perceived challenges in managing new technological tools. These inhibitors, while not overwhelmingly high, may still pose obstacles to full integration and effective use of technology in the classroom.

The close proximity of the two scores—3.79 for motivators and 3.77 for inhibitors—illustrates a delicate balance between enthusiasm and reservation among teachers. This balance suggests that while many teachers are inclined to embrace technology, their readiness is tempered by factors that could hinder widespread adoption. Addressing these inhibitors through targeted training or resource allocation could help shift the balance more decisively in favor of technology adoption, fostering a more tech-ready educational environment.

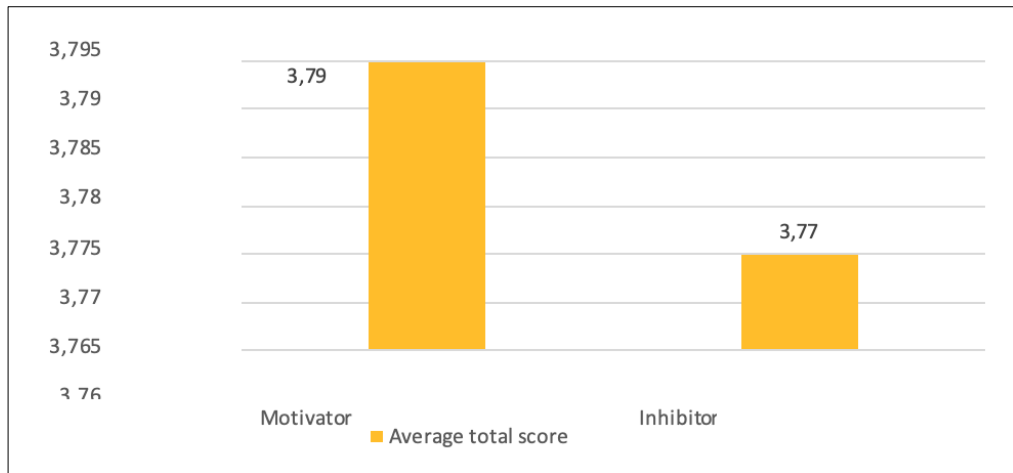


Figure 4. Motivator and inhibitor categories

Figure 5 further explores the dimensions of technology readiness, showcasing the specific aspects that contribute to the respondents' overall readiness levels. This detailed breakdown helps in understanding how each dimension—optimism, innovativeness, discomfort, and insecurity—plays a role in shaping the teachers' attitudes toward technology. The analysis of these dimensions provides critical insights into how schools and policymakers can better support educators in overcoming inhibitors and enhancing their motivators to foster a more technology-ready teaching environment.

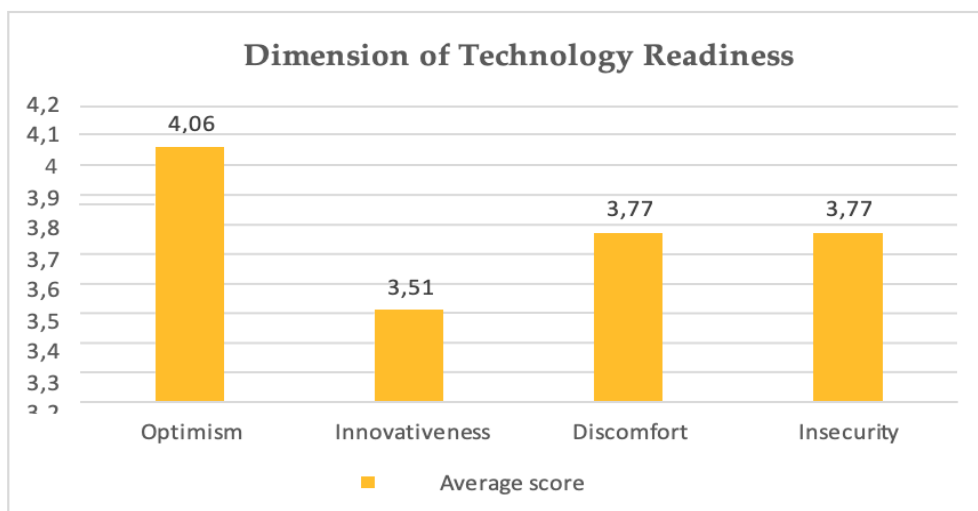


Figure 5. Technology readiness dimension

Proactive school management

Understanding technology has become an essential requirement for students in the digital age. With a solid grasp of technology, students can expand their access to information, develop communication skills, enhance creativity, and better prepare for a future that is increasingly connected through digital means. In order to support teachers in utilizing technology effectively in their classrooms, the role of school management becomes crucial, as illustrated in [Figure 6](#).

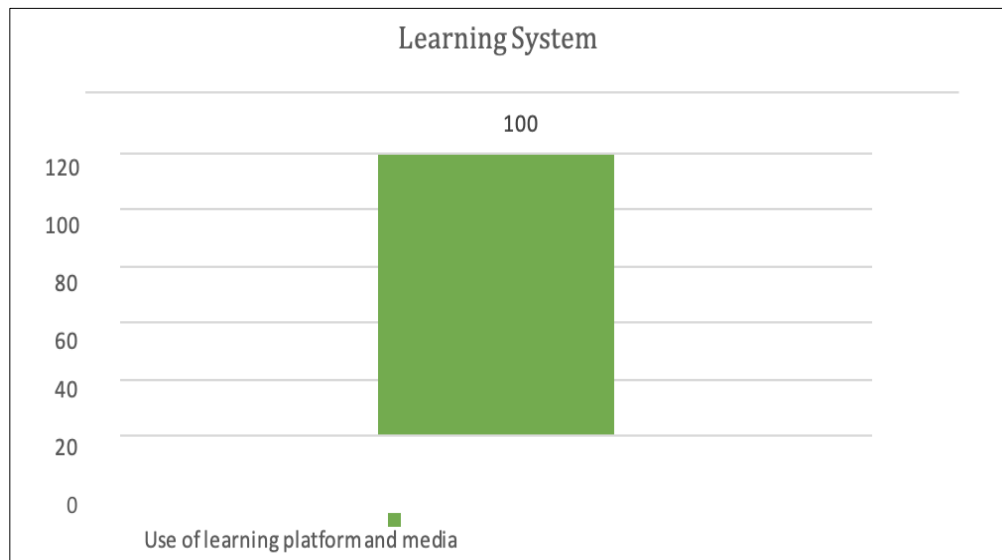


Figure 6. School support toward the use of technology for teachers

[Figure 6](#) demonstrates the full support of school management toward the use of technology in learning systems, with 100% of respondents indicating that they utilize media or learning platforms according to their specific educational needs. This data highlights that all participating schools have taken active steps to integrate technology into their teaching environments. Such support could include providing teachers with access to digital tools, professional development opportunities, and continuous technical support, ensuring that teachers are equipped to implement technology in their teaching practices effectively. The universal endorsement of technology use by school management, as reflected in the figure, underscores the importance of institutional backing in fostering a technology-rich learning environment. With such comprehensive support, teachers are more likely to embrace and integrate technology into their teaching methods, ultimately enhancing the overall learning experience for students. The figure suggests that effective leadership and resource allocation play a pivotal role in advancing the digital transformation of education.

This question was designed to assess how school management supports the implementation of technology. All schools indicated their full support for technology integration. Technology in schools is utilized through various media or platforms that align with the learning needs, and teachers are also leveraging these tools to assign tasks, administer tests or quizzes, and engage in discussions with students. The types of media or platforms employed by schools are illustrated in [Figure 7](#).

Based on the research results, the most frequently used media for learning are digital platforms, which account for 53% of the total usage. These platforms include webinar tools such as Zoom, Google Meet, Edmodo, and others, which facilitate virtual classroom activities. Following platforms, educational applications are the second most frequently used media, with 27% of respondents indicating their reliance on tools such as Google Classroom and Quizizz, which are designed to enhance the learning experience

through digital interaction and assessments. Additionally, interactive media, including social media platforms such as WhatsApp groups, Line, and other messaging tools, were used by 16% of respondents. These platforms are often employed to facilitate communication and interaction between teachers and students. Interestingly, no respondents indicated the use of Microsoft Office tools for teaching, and only 4% mentioned using offline media. These findings highlight the preference for online platforms and applications in supporting the digital transformation of education.

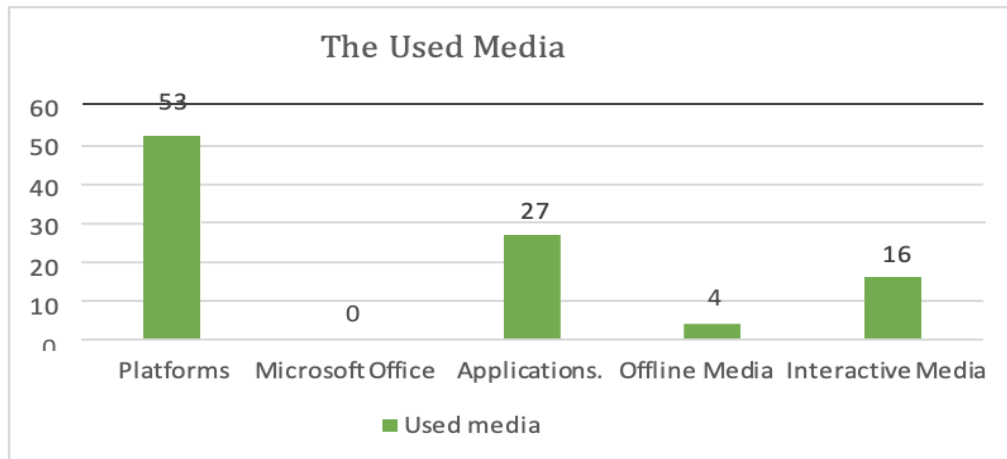


Figure 7. The used media and digital platforms

Furthermore, Table 2 presents the results of the technology readiness category test, dividing the analysis into two main aspects: Motivator and Inhibitor. The Motivator aspect includes factors such as age, gender, education, field of study, years of teaching, and teaching location. For age, education, field of study, and years of teaching, the p-values are all greater than 0.05, indicating no significant difference in technology readiness motivators among these categories. This suggests that teachers' readiness to adopt technology is relatively consistent across these demographic groups. However, the table shows a significant difference in the Gender ($p = 0.004$) and Teaching Location ($p = 0.024$) categories. This implies that gender and teaching location have a notable influence on teachers' motivation to adopt technology, with different levels of readiness observed across these groups.

The second part of the table focuses on the Inhibitor aspect, which includes the same demographic categories: age, gender, education, field of study, years of teaching, and teaching location. In contrast to the motivator aspect, none of the categories show significant differences, as all p-values are above the 0.05 threshold. This indicates that factors like age, gender, education, and others do not significantly affect the inhibitors that might prevent teachers from adopting technology. Thus, while gender and teaching location influence motivators, no demographic factors appear to strongly influence the inhibitors, suggesting that barriers to technology adoption are fairly uniform across different groups of teachers.

Table 2. Technology readiness category test

Aspect	Data	P-value	Description
Motivator	Age	0.654	No significant difference in motivator for using technology between age groups
	Gender	0.004*	Significant difference in motivator for using technology between genders
	Education	0.366	No significant difference in motivator for using technology between education levels

Aspect	Data	P-value	Description
	Field of study	0.239	No significant difference in motivator for using technology between fields of study
	Years of teaching	0.968	No significant difference in motivator for using technology between years of teaching experience
	Teaching location	0.024*	Significant difference in motivator for using technology between teaching locations
Inhibitor	Age	0.294	No significant difference in inhibitor for using technology between age groups
	Gender	0.284	No significant difference in inhibitor for using technology between genders
	Education	0.269	No significant difference in inhibitor for using technology between education levels
	Field of study	0.463	No significant difference in inhibitor for using technology between fields of study
	Years of teaching	0.680	No significant difference in inhibitor for using technology between years of teaching experience
	Teaching location	0.356	No significant difference in inhibitor for using technology between teaching locations

Discussion

The findings of this study reveal that senior high school teachers in Bandung exhibit a moderate level of technology readiness, with the motivator aspect being higher than the inhibitor aspect. This suggests that while teachers demonstrate a significant inclination to adopt and integrate new technologies into their teaching practices, there are still factors that hinder full technology adoption. Gender and teaching location were found to significantly impact technology readiness in terms of motivators, whereas factors such as age, education, and field of study did not present significant differences. For inhibitors, none of the demographic categories showed significant differences, indicating that barriers to technology adoption are uniformly distributed among the teachers. These results are consistent with previous studies (Ren & Zhou, 2022; Nzabhimana et al., 2024), which also found moderate levels of technology readiness and emphasized the importance of overcoming barriers to achieve higher readiness.

According to Collado (2024), private schools are better equipped with technological facilities compared to public schools. Public schools, on the other hand, often rely on government funding, which is not always evenly distributed. As a result, private school teachers may feel more motivated to adopt new technologies due to the better infrastructure available to them. This disparity in facilities explains why teaching location was a significant factor in the motivator aspect of technology readiness in this study (Rowe & Perry, 2019). Teachers in private schools, with better access to technological tools, are more concerned to use new technologies effectively in their teaching practices (Azaola, 2021).

In contrast to previous studies (Rojas-Méndez et al., 2017), this research found no significant difference in technology readiness across age groups. Rojas-Méndez et al. (2017) argued that younger individuals are typically more willing to adopt advanced technologies, while older individuals are more resistant to change due to declining cognitive abilities. However, this study's findings may differ due to the uneven distribution of age within the sample, suggesting that age may not be a strong determinant of technology readiness in this context. The absence of a significant difference based on age suggests that both younger and older teachers have similar tendencies to adopt new

technologies, possibly due to the growing necessity of technology integration in education during and after the COVID-19 pandemic (Polly et al., 2023).

The findings regarding the education background variable also diverge from those of previous studies. Nzabahimana et al. (2024) found a significant relationship between education background and the discomfort dimension of technology readiness, while this study did not find any significant differences. This discrepancy could be attributed to the different focuses of the studies. Nzabahimana et al. (2024) research focused on individual dimensions of technology readiness, while this study assessed the overall categories of motivators and inhibitors, which might explain the different outcomes. Furthermore, this study's finding that the field of study does not significantly affect technology readiness aligns with the research by Ren & Zhou, 2022. Teachers across different subjects appear to face similar conditions when adopting technology, as there are no specific guidelines requiring the use of certain technologies for particular subjects.

The analysis of teaching experience revealed no significant differences in technology readiness, supporting the findings of Collado (2024), who concluded that the length of teaching experience does not influence technology adoption. This result indicates that both novice and experienced teachers share similar levels of technology readiness, likely because the rapid technological advancements in education have affected all teachers, regardless of their years of service.

In terms of the dimensions of technology readiness, the optimism dimension scored the highest, indicating that teachers generally have a positive outlook on technology and believe it can enhance control, flexibility, and efficiency in their teaching practices. This result is consistent with Ren & Zhou, 2022, who emphasized that teachers' confidence in using technology plays a crucial role in its adoption. The availability of technology during the pandemic may have reinforced this sense of optimism, as teachers experienced the benefits of technology in enabling remote learning.

The innovativeness dimension was found to be moderate, reflecting a tendency among teachers to be early adopters of technology in their schools. However, certain factors, such as resource constraints and insufficient training, may still hinder their ability to fully explore new technologies. As Rojas-Méndez et al. (2017) noted, innovativeness refers to the inclination to experiment with new tools and methods, and in this study, teachers were encouraged to find the most effective technological tools for their teaching methods, fostering creativity and innovation.

The discomfort dimension also scored moderately, indicating that some teachers perceive a lack of control or feel overwhelmed by the complexity of new technologies. This result aligns with Nzabahimana et al. (2024), who highlighted the negative consequences of anxiety related to technology use. Teachers may initially struggle with new tools but become more comfortable over time, as familiarity with technology increases with use.

The insecurity dimension scored the highest among inhibitors, suggesting that teachers have significant concerns about the reliability and effectiveness of new technologies. Nzabahimana et al. (2024) pointed out that insecurity stems from skepticism regarding the quality of technology and a lack of control over its implementation. Teachers who feel insecure about new technologies may be hesitant to incorporate them into their teaching, leading to negative perceptions about their role in education.

From a theoretical perspective, this study contributes to the literature on technology readiness by expanding the understanding of how demographic factors influence the adoption of technology in education. Practically, the results provide valuable insights for school administrators and policymakers. Proactive school management, including targeted training and support, can play a critical role in enhancing teachers' technology readiness. By addressing the specific barriers identified in this study, such as discomfort and insecurity, schools can better prepare teachers for the digital transformation of education. Future research could explore intervention strategies that

effectively reduce inhibitors and strengthen motivators, thus increasing technology adoption among teachers.

Conclusion

Senior high school teachers in Bandung exhibit a moderate level of technology readiness. This finding indicates the presence of both inhibiting and motivating factors that influence the adoption and use of technology among teachers. A proactive school management approach plays a crucial role in enhancing technology readiness by encouraging teachers to integrate and adopt new technologies, particularly in their professional roles. Such management support is essential to help teachers navigate the increasing demands of digital integration in education. A significant difference was observed in the motivator aspect of technology use, particularly regarding gender, where male teachers were found to be more inclined to adopt new technologies compared to their female counterparts. Similarly, teachers in private schools were more motivated to use new technologies than those in public schools. These differences highlight the need for school management to ensure that all teachers, regardless of gender or teaching environment (public or private schools), are equally prepared and equipped to use technology effectively in the classroom. Addressing these gaps will be crucial in creating a more equitable and technologically adept teaching workforce.

The practical implications of these findings suggest that school management should focus on ongoing professional development, providing teachers with the necessary tools and support to stay abreast of technological advancements. The Indonesian Ministry of Education should also prioritize equal access to resources, facilities, and technological knowledge between public and private schools to foster a more uniform level of technology readiness among teachers. However, this study has its limitations. The research focused on a specific geographical location and did not explore the long-term effects of technology integration among teachers. Future research should consider more comprehensive intervention strategies aimed at reducing the inhibitors and enhancing the motivators of technology readiness. Further studies could also assess the effectiveness of different types of school management interventions in boosting technology adoption and examine how these strategies impact educational outcomes over time.

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