Work Adaptability and Leadership Competence on the Digital Fluency of School Administrators

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ABSTRACT

Digital fluency among school administrators is essential for effective leadership and adaptability in today's technology-driven educational landscape. It enables administrators to use digital tools that enhance communication, collaboration, and overall institutional effectiveness. This study investigated the relationship between work adaptability and leadership competence in shaping the digital fluency of school administrators, focusing on the Schools of Damulog South District and Bukidnon National School of Home Industries (BNSHI) in Maramag II for the academic year 2024–2025.

The research aimed to determine the levels of work adaptability among school administrators, examining flexibility, problem-solving, and learning orientation; describe their leadership competence in terms of visionary leadership, decision-making, and supportive leadership; and assess their digital fluency. Additionally, the study sought to establish the significant relationships between work adaptability, leadership competence, and digital fluency, as well as identify the best predictors of digital fluency.

Using a descriptive-correlational method, the study employed a survey questionnaire for data collection. Descriptive statistics, Pearson Product Moment of Correlation (Pearson r), and Regression analysis were applied to analyze the results. Findings revealed a "Highly Practiced" level of work adaptability, a "Strong Leadership" level of leadership competence, and a "Fluent" level of digital fluency among administrators. Notably, strong positive correlations were identified between problem-solving abilities ($\beta = 0.417$) and supportive leadership ($\beta = 0.369$) with digital fluency, together accounting for about 55% of the variance in effective technology use.

These results suggest that enhancing work adaptability and leadership competence significantly improves the digital fluency of school administrators. Educational institutions should prioritize professional development programs to strengthen these skills, equipping leaders to better integrate technology in modern education. Future research should explore the effectiveness of targeted training programs and their impact on student achievement and engagement in diverse educational settings.

Keywords: Digital Fluency, Leadership Competence, School Administrators, Work Adaptability.

INTRODUCTION

Technology integration in education has become increasingly vital, particularly for school administrators tasked with navigating the complexities of modern educational environments. Digital fluency, the ability to effectively use technology to communicate, collaborate, and manage information, has emerged as a crucial competency for these leaders. Technology can significantly enhance educational delivery and administrative

efficiency in a medium-sized school setting, where resources are adequate yet limited. As schools shift towards digital platforms for communication, assignment submission, and overall management, administrators must be proficient in leveraging these tools to foster an engaging learning environment.

Given the rapid pace of technological advancement in education, it is crucial to examine the factors contributing to digital fluency among school administrators, particularly those new to their roles and often overwhelmed by their positions' demands. In our schools in the Division of Bukidnon, many administrators need more experience and familiarity with technology. This situation highlights the urgent need for effective technology integration, especially as classroom interactions continue to evolve. Understanding the relationship between digital fluency and administrative competence is vital for creating targeted professional development programs that equip administrators with the skills necessary to succeed in a technology-driven educational environment (Nita & Gutu, 2023). Addressing these gaps can better prepare school leaders to navigate modern educational challenges and enhance overall performance.

As students increasingly take charge of their learning, teachers are transitioning into roles as mentors and facilitators rather than mere content deliverers. This shift necessitates that school administrators possess technical skills and the ability to create an environment conducive to collaborative learning. Research indicates that when technology is effectively integrated into educational settings, it enhances student engagement and improves academic outcomes (Voogt & McKenney, 2017). Thus, school leaders must have the skills to guide their staff in adopting innovative teaching methods that leverage technology effectively.

Moreover, administrators must direct various challenges associated with technological integration, including resistance from staff or students and the need for ongoing training. Flexibility in adapting strategies and problem-solving skills are essential for overcoming these obstacles (Fulgence, 2020). A commitment to continuous learning ensures that school leaders remain informed about emerging technologies and pedagogical practices (Newton, 2018). As such, this study will explore how these dimensions of work adaptability contribute to enhancing digital fluency among school administrators.

On the other hand, leadership competence characterized by visionary leadership, decision-making, and supportive leadership provides the framework within which these adaptations occur. Visionary leaders inspire their teams to embrace technological change by articulating a clear vision for digital integration in education. Effective decision-making ensures that the right tools and strategies are selected to meet the specific needs of the school community. Supportive leadership fosters a collaborative environment where teachers feel empowered to explore innovative teaching methods incorporating technology (Manaf, 2024).

The significance of this study lies in its potential to provide insights into the necessary competencies that school administrators must develop to thrive in a technology-driven educational environment. By assessing the work adaptability and leadership competence levels among school administrators in the Damulog South District of Bukidnon through a survey questionnaire, this research will evaluate how these factors influence digital fluency and ultimately contribute to improved educational outcomes. Understanding the interplay between work adaptability, leadership competence, and digital fluency can guide professional development initiatives to enhance administrative effectiveness. As schools integrate technology into their operations, equipping administrators with these essential skills will foster an environment conducive to teacher and student success.

The role of technology in education extends beyond mere administrative tasks; it fundamentally alters how educators approach teaching and learning. For instance, interactive whiteboards and online collaboration platforms enable teachers to create dynamic learning experiences that cater to diverse student needs (Exeed College, 2022). These technologies facilitate engagement and promote critical thinking skills as students interact with content meaningfully. Administrators must recognize the importance of investing in such technologies while ensuring teachers receive adequate training. This investment is not merely financial; it requires a cultural shift within schools towards embracing innovation to improve educational quality.

Furthermore, integrating technology into education can help bridge gaps in equity among students from different backgrounds. Research shows that when technology is used thoughtfully, it can provide equitable

access to learning opportunities that may otherwise be unavailable (Kirkwood & Price, 2014). For example, students with disabilities can benefit from assistive technologies that facilitate their participation in classroom activities. School administrators are crucial in advocating for such resources and ensuring effective implementation within their institutions. By fostering an inclusive environment where all students can thrive through technology-enhanced learning experiences, school leaders contribute significantly to closing achievement gaps.

As we look toward the future of education in the Philippines, digital fluency is becoming increasingly essential for educators and students. The Department of Education (DepEd) has acknowledged the urgent need for a "revolutionary transformation" in education through technology integration, especially following the challenges posed by the COVID-19 pandemic. This transformation requires access to technology and comprehensive training for all stakeholders —teachers, students, and administrators- to prepare them for an evolving educational landscape marked by rapid technological advancements. The demand for digital fluency is more pronounced in the Philippines, where tools like Learning Management Systems (LMS) are being adopted. However, significant challenges remain, particularly in rural areas with limited access to reliable internet and modern devices.

Therefore, ensuring that all educators and administrators receive adequate training in using these technologies and creating inclusive learning environments is crucial. This study aims to provide insights into how work adaptability and leadership competence can enhance digital fluency among school administrators, ultimately leading to improved educational outcomes and aligning with national policies promoting digital literacy across all educational levels.

Objectives of the Study

This study addressed school administrators' digital fluency, considering their work adaptability and leadership competence level for the school year 2024 and 2025. Specifically, it sought to:

1. Determine school administrators' work adaptability levels in the following aspects: 1.1. flexibility; 1.2. problem-solving skills; and 1.3. learning orientation;

2. Describe school administrators' leadership competence levels in 2.1. visionary leadership; 2.2. decision-making; and 2.3. supportive leadership.

3. Assess the overall level of digital fluency of school administrators;

4. Find out if there is a significant relationship between the level of work adaptability, leadership competence, and digital fluency of school administrators; and,

5. Find out which variable best predicts the digital fluency of school administrators.

METHODOLOGY

Research Design

The study utilized a descriptive–correlational method to explain the relationships between two or more variables. This design is critical for understanding the cause-and-effect relationships among variables (Robson, 2015). The descriptive aspect of the design specifically defined work adaptability and leadership competence regarding the digital fluency of school administrators. Pearson correlation was employed to determine the relationships between the independent and dependent variables.

Locale of the Study

The study was conducted in the Province of Bukidnon, explicitly focusing on the Division of Bukidnon, which includes the Schools of Damulog South District and the Bukidnon National School of Home Industries in Maramag District II, under the Department of Education. This province, situated in the northern part of Mindanao, is known for its diverse ethnic and tribal communities spread across various regions and mountainous areas. As a result, the education sector in Bukidnon faces the challenge of accommodating a

range of learning styles and curricula to meet the diverse needs of its learners. Many schools are located in remote and hard-to-reach communities, impacting the quality and inclusiveness of education provided by the Department of Education. Despite being known as the Province of the Mountains, Bukidnon is home to numerous recognized institutions that promote quality education and diversity within the country.

Respondents of the Study

Participants were drawn from the Schools of Damulog South District and the Bukidnon National School of Home Industries in Maramag District II, under the Department of Education – Division of Bukidnon. The study included 104 respondents, selected explicitly from these districts. The research focused on school administrators, with respondents comprising teachers, head teachers, and master teachers, ensuring a diverse representation of educational roles, who evaluated their administrators for the academic year 2024–2025.

Research Instruments

Data collection was primarily conducted through an online survey questionnaire. Before administering the survey, the researchers sought permission from the original researchers to use adapted and modified questionnaires to ensure the legitimacy of the standardized materials. The survey instrument consisted of four parts: Part I collected personal information, Part II assessed work adaptability, Part III evaluated leadership competence, and Part IV examined the digital fluency of school administrators. The questionnaires were patterned from established studies, including Northouse (2016) for work adaptability, Leithwood & Jantzi (2000) for leadership competence, and Hattie & Donoghue (2016) for digital fluency.

Additionally, permission was obtained from the Office of the School District Supervisor and the respective school principals to conduct the study and distribute the online survey in the area. Participation was voluntary, and participants were informed they could withdraw anytime. The researchers assured participants that all information gathered would be treated with utmost confidentiality under Republic Act 10173, also known as the Data Privacy Act of 2012. The data obtained were significant for discussing results, formulating recommendations, and drawing conclusions.

Statistical Techniques

The research instruments were content validated by three experts and underwent pilot testing. The reliability scores for work adaptability and leadership competence were .970, while digital fluency received a score of .862, resulting in an overall reliability score with a Cronbach's Alpha of .978. Before the study, participants received an orientation and completed informed consent forms. The statistical techniques employed in the analysis included descriptive statistics, Pearson Product Moment Correlation (Pearson r), and Regression analysis to evaluate the relationships among the variables.

RESULTS AND DISCUSSION

This presents the interpretation and analysis of data gathered following the order of the specified problems of this study.

School Administrators' Work Adaptability

School administrators' work adaptability is crucial for navigating the dynamic challenges of the educational landscape, allowing them to effectively respond to changing student needs, implement new technologies, and adjust to evolving policies.

Table 1. Summary Table on Work Adaptability of School Administrators

INDICATOR	MEAN	QI
Flexibility	3.80	Highly Practiced

Learning Orientation	3.78	Highly Practiced
Problem-solving skills	3.76	Highly Practiced
OVERALL MEAN	3.78	Highly Practiced

Legend:

Range	Description	Qualitative Interpretation
4.51 – 5.00	Strongly Agree	Very Highly Practiced
3.51– 4.50	Agree	Highly Practiced
2.51 – 3.50	Neutral	Moderately Practiced
1.51 – 2.50	Disagree	Less Practiced
1.00 – 1.50	Strongly Disagree	Not Practiced at All

Table 1 presents the summary of the level of school administrators' work adaptability in terms of flexibility, learning orientation, and problem-solving skills. As shown in the table, the indicator Flexibility has the highest mean of 3.80 "Highly Practiced". Followed by Learning Orientation with a mean of 3.78 "Highly Practiced". While the indicator Problem-solving skills has the lowest mean of 3.76 "Highly Practiced". The overall mean score of 3.78 indicates that the work adaptability of these administrators is "Highly Practiced" in these areas, suggesting they demonstrate strong adaptability and the capacity to navigate the diverse demands of their roles.

The high mean score of 3.80 on the flexibility indicator suggests that administrators excel in their ability to adapt to changing circumstances and respond effectively to emerging needs. This flexibility is crucial for school leaders who operate in complex and dynamic educational environments. The administrators also exhibit a strong learning orientation, with a mean score of 3.78, indicating they prioritize continuous learning and professional development. This mindset supports their capacity to acquire new knowledge and skills, enabling them to enhance their leadership practices.

Furthermore, the mean score of 3.76 on problem-solving skills suggests that administrators are highly skilled at identifying issues, analyzing information, and developing solutions. This problem-solving capacity is essential for effective decision-making and driving school improvement initiatives. The overall "Highly Practiced" rating across these critical indicators highlights the school administrators' strong work adaptability, enabling them to lead their schools effectively, respond to challenges, and support positive student outcomes.

It implies that school administrators possess a high level of work adaptability, demonstrating strong flexibility, a commitment to continuous learning, and practical problem-solving skills. This adaptability enables them to navigate the complexities of educational environments and respond effectively to the diverse demands of their roles, ultimately contributing to improved educational outcomes. This result is supported by the study of Yreck (2023), which emphasizes that adaptability enables school leaders to respond effectively to evolving challenges by adjusting strategies and fostering resilience among staff and students. Similarly, a study by Thompson and Miller (2024) highlights that flexibility and situational awareness are critical responsibilities of school leadership that correlate with student achievement. These studies underscore the importance of adaptability in enhancing leadership effectiveness.

On the other hand, some research presents opposing views regarding the implications of adaptability. Sucuoğlu et al. (2022) argue that an excessive focus on adaptability can lead to inconsistencies in policy implementation across schools, potentially undermining standardized educational practices. This suggests a need for a balanced approach that considers adaptability and consistency in leadership strategies. By maintaining this level of

adaptability, administrators can continue to foster a conducive environment for teaching and learning, ultimately contributing to the success and growth of their educational institutions.

School Administrators' Leadership Competence

Table 2 shows that school administrators' leadership competence indicates "Strong Leadership" regarding visionary, decision-making, and supportive leadership, with an overall mean of 3.90.

Table 2. Summary of the School Administrators' Leadership Competence

	INDICATOR	MEAN	QI
1	Supportive Leadership	3.97	Strong Leadership
2	Decision-making	3.88	Strong Leadership
3	Visionary Leadership	3.84	Strong Leadership
	OVERALL MEAN	3.90	Strong Leadership

Legend:

Range	Description	Qualitative Interpretation
4.51 – 5.00	Strongly Agree	Exceptional Leadership
3.51– 4.50	Agree	Strong Leadership
2.51 – 3.50	Neutral	Basic Leadership
1.51 – 2.50	Disagree	Weak Leadership
1.00 – 1.50	Strongly Disagree	Poor Leadership

Table 2 shows that school administrators' leadership competence indicates "Strong Leadership" regarding visionary, decision-making, and supportive leadership, with an overall mean of 3.90.

The data revealed that the level of leadership competence in terms of Supportive Leadership has the highest mean of 3.97 "Strong Leadership", followed by Decision-making with a mean of 3.88 "Strong Leadership" while the indicator Visionary Leadership obtained the lowest mean of 3.84, qualitatively interpreted as Strong Leadership.

The high ratings across all three indicators indicate that these leaders are capable and proactive in driving school improvement and fostering a positive school culture. This level of competence is crucial for navigating challenges and supporting student and staff growth. Lusung et al. (2023) state that supportive leadership significantly predicts leadership effectiveness, highlighting its crucial role in fostering positive outcomes among youth leaders. Similarly, the study by Suazo and Villocino (2022) concludes that supportive leadership styles significantly enhance teacher job satisfaction, indicating school administrators' critical role in fostering a positive educational environment. Furthermore, the study of Dalagan (2023) found that collaborative leadership significantly contributes to creating a positive school culture, which fosters teamwork and enhances the overall quality of work life for educators. The study of Tosun and Bozkurt (2024) emphasizes that administrative support is crucial in enhancing teachers' perceptions of organizational support, positively influencing their leadership capabilities.

According to Wenceslao et al. (2018), practical leadership skills significantly correlate with improved school

performance and a positive school climate, underscoring the critical role of school administrators in fostering educational success. Similarly, Mason (2022) emphasizes that strong communication skills and emotional intelligence are crucial for effective school leadership, enabling leaders to build relationships that enhance student achievement. Furthermore, Kadri, Mansor, and Nor (2021) highlight that principals with strong decision-making capabilities positively influence their schools' operational effectiveness.

Conversely, some studies present opposing views regarding the implications of leadership competencies. Carrington (2021) argues that overemphasizing specific competencies may lead to more attention to other critical areas, such as community engagement and stakeholder involvement in decision-making processes. This perspective suggests that while strong leadership is vital, it must be balanced with collaborative approaches to ensure comprehensive school improvement.

The findings regarding school administrators' leadership competence are encouraging and highlight substantial benefits for educational leadership. They indicate that effective leadership significantly influences student outcomes and overall school performance. Strong leadership fosters a positive school culture and enhances teachers' effectiveness, ultimately improving student achievement. Furthermore, as educational environments continue to evolve, the role of school leaders in promoting innovation and teamwork becomes increasingly vital.

School Administrators' Digital Fluency

Table 3. Mean Scores of School Administrator's Digital Fluency.

	INDICATOR The administrator…	MEAN	QI
1	Actively promotes the use of innovative digital tools among both staff and students to improve educational outcomes.	3.79	Fluent
2	Demonstrates a strong ability to effectively integrate technology into the school's curriculum.	3.75	Fluent
3	Explores new technologies that enhance learning experiences.	3.74	Fluent
4	Allocates adequate resources and tools for teachers to adopt and improve their digital teaching methods.	3.66	Fluent
5	Responds promptly to concerns raised through digital communication channels by staff members or parents/guardians.	3.64	Fluent
6	Regularly informs staff about important information/updates and events through digital newsletters or emails, ensuring timely communication.	3.63	Fluent
7	Effectively utilizes learning management systems to streamline communication, resource sharing, and assessment among teachers and students.	3.60	Fluent
8	Utilizes various digital platforms to facilitate efficient and effective communication with staff and the broader school community.	3.59	Fluent
9	Demonstrates a high level of proficiency in using educational technology tools to enhance teaching and learning throughout the school.	3.59	Fluent
10	Uses digital tools well to improve administrative tasks and make school operations smoother.	3.58	Fluent
	OVERALL MEAN	3.66	Fluent

Legend:

Range	Description	Qualitative Interpretation
4.51 – 5.00	Strongly Agree	Highly Fluent
3.51– 4.50	Agree	Fluent
2.51 – 3.50	Neutral	Moderately Fluent
1.51 – 2.50	Disagree	Slightly Fluent
1.00 – 1.50	Strongly Disagree	Not Fluent

Table 3 shows the mean scores for school administrators' digital fluency. Digital fluency is the skill to effectively and strategically incorporate digital technologies into educational practices. As shown, the digital fluency exhibited by school administrators reveals an overall mean score of 3.66, categorizing these administrators as 'Fluent' in their utilization and integration of educational technology. This reflects their proficiency in directing the digital landscape to enhance educational outcomes.

Among the other indicators of digital fluency, the statement "The administrator actively promotes the use of innovative digital tools among staff and students to improve educational outcomes" received the highest mean score of 3.79. This score categorizes the administrator as "Fluent" in this particular aspect of digital fluency, indicating that they are effective in encouraging the use of innovative digital tools to enhance educational results for teachers and students. Additionally, it is followed by the statement, "The administrator demonstrates a strong ability to effectively integrate technology into the school's curriculum", with a mean score of 3.75, indicating that they successfully incorporate digital resources into core educational experiences.

Furthermore, the statement "The administrator explores new technologies that enhance learning experiences" got the third highest mean, which means the administrators exhibit a positive approach to exploring new technologies that can enrich student learning experiences, as evidenced by a mean score of 3.74 on this indicator. This willingness to embrace innovative technological solutions underscores their commitment to continuously improving the educational environment. However, the statement "The administrator uses digital tools well to improve administrative tasks and make school operations smoother" had the lowest mean, which also reveals an area for improvement; the administrators scored relatively lower, with a mean of 3.58, on their ability to utilize digital tools effectively for administrative tasks and streamlining school operations. This gap indicates an opportunity for further development in leveraging technology to enhance efficiency and organization in their administrative roles.

This implies that school administrators are generally good at using digital technology in education and they are particularly effective at promoting innovative tools and integrating technology into the curriculum. This is supported by the study of Raptis et al. (2024), which states that effective school leadership necessitates strong digital competencies, especially when using new technologies to improve communication and operational efficiency. Additionally, research by De Los Reyes and Orongan (2023) emphasizes that developing digital fluency is essential for educators to engage with students and effectively integrate technology into teaching practices. Similarly, a study by Raptis (2022) highlights the critical role of school leaders in fostering a digitally empowered educational environment, noting that their ability to manage technological resources directly impacts school performance. However, Celeste and Osias (2024) suggest that while training programs exist to enhance ICT literacy among school leaders, they are often limited in scope and accessibility, particularly in rural areas where resources may be scarce. This limitation can hinder the overall effectiveness of technology integration in schools. Supportive principal involvement is essential as it significantly enhances the implementation of comprehensive school digital programs, leading to improved educational outcomes (Raptis et al., 2023). This highlights that administrators have important role in creating an environment that supports effective teaching and learning.

Relationship of Work Adaptability and Leadership Competence to Digital Fluency of School Administrator

Table 4. Relationship of School Administrators' Work Adaptability and Leadership Competence on their Digital Fluency

	Pearson Correlation (r-value)	Significance (P-Value)
Work Adaptability	.715	.000**
Flexibility	.670	.000**
Problem-solving skills	.702	.000**
Learning Orientation	.664	.000**
Leadership Competence	.711	.000**
Visionary Leadership	.665	.000**
Decision-Making	.676	.000**
Supportive Leadership	.691	.000**
Digital Fluency	.670	.000**

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Legend:

  * =Significant

  **=Highly Significant

  ns= Not Significant

Significant level (p<0.05) at 5% level

This study aimed to determine the relationships between work adaptability, leadership competence, and digital fluency of school administrators. These relationships were analyzed using Pearson Product Moment correlation, as shown in Table 4.

The findings suggest that a well-rounded approach to training school leaders can improve their performance and benefit the community. It can be gleaned that work adaptability and leadership competence were positively correlated with digital fluency. A key finding is the strong positive correlation between work adaptability and problem-solving skills, with a correlation coefficient of 0.702, which is highly significant. This indicates that administrators with more vital problem-solving abilities are also more adaptable in their work environments. Additionally, work adaptability shows strong correlations with flexibility (0.670) and learning orientation (0.664), which are also statistically significant. This suggests that administrators who are open to new approaches and continuously seek to expand their knowledge and skills are better equipped to navigate the evolving demands of their roles.

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The analysis further reveals a close relationship between leadership competence and digital fluency. All three indicators of leadership competence, visionary leadership, decision-making, and supportive leadership, exhibit highly significant positive correlations with digital fluency, ranging from 0.665 to 0.691. The strongest correlation is observed between supportive leadership and digital fluency (0.691), indicating that administrators with a higher degree of digital proficiency tend to exhibit more effective leadership skills. This finding emphasizes the importance of integrating digital tools into leadership practices, as it enables administrators to provide better guidance and support to their staff and stakeholders.

This implies that the analysis shows strong connections between school administrators' ability to adapt, leadership skills, and their use of digital technology. The results suggest that training programs should focus on multiple areas to improve performance and benefit the entire school community. This is supported by the study of Aquino, Bonimar, and Fitzgerald (2021), which indicates that effective school heads demonstrate leadership practices that significantly influence teachers' performance and the overall educational environment. Mainly, administrators who are good at problem-solving are also more adaptable, and those who are flexible and eager to learn can better handle their responsibilities.

According to Luecha et al. (2022), there is a strong connection between school administrators' adaptability, their leadership skills, and their proficiency in digital technology. The research shows that good digital leadership includes several essential parts, like having a clear vision and strong problem-solving skills, which are needed to deal with the challenges in today's schools. The findings suggest that training programs cover these areas to improve performance and help the whole school community. Specifically, administrators who are flexible and eager to learn can manage their responsibilities better. Additionally, the study points out a strong connection between leadership skills and digital fluency, meaning that administrators who are good with technology are also more effective leaders.

A study by Acera et al. (2023) found that effective leadership practices are significantly linked to improved school performance. This highlights the importance of leadership competencies and their interconnectedness within educational settings. Similarly, Guncavdi-Alabay (2023) demonstrated that school administrators' solution-focused approaches significantly correlate with their conflict management strategies, highlighting the importance of adaptability to ineffective leadership. Furthermore, a study by Antia and Dioso (2023) emphasizes that strong digital fluency among school leaders is crucial for enhancing instructional practices and overall school effectiveness.

Conversely, Schmitz (2023) argues that while digital fluency is vital for school leaders, overemphasizing technology can detract from essential interpersonal skills necessary for effective leadership. This perspective suggests that fostering digital proficiency is vital but should not overshadow the importance of building solid relationships within the school community. Additionally, Afzal et al. (2023) point out that disparities in access to technology training may limit some administrators' abilities to fully develop these competencies, potentially exacerbating inequalities within educational settings.

The findings indicate that a comprehensive training strategy for school leaders can significantly enhance their effectiveness and positively impact the school community. The research highlights a positive correlation between work adaptability and leadership skills with digital fluency. Supporting this view, research by Neufeld (2014) emphasizes the critical role of effective school leadership in improving student achievement. The study shows that school leaders need to create a clear vision and direction while also working to develop their staff's skills and reorganizing the school to meet educational goals.

Regression Analysis of the Predictors of Digital Fluency of School Administrators

Table 5. shows the stepwise regression analysis that found the best predictor of digital fluency among school administrators.

It shows the beta coefficient and the corresponding p-values. As revealed in the table, two predictors were found to be the variables that best predict the digital fluency of school administrators.

Table 5. Regression analysis showing the relationship of Work Adaptability and Leadership Competence with the Digital Fluency of School Administrators

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.675	.276		2.449	.016
	Problem-Solving Skills	.416	.105	.417	3.957	.000
	Supportive Leadership	.357	.102	.369	3.501	.001

a. Dependent Variable: DIGITAL FLUENCY

R = .740 R^2 = .548   F-value = 61.165   P – value = .000

*=Significant at the 5% level

Problem-solving skills, particularly in the context of work adaptability, were identified as the most significant predictor of digital fluency of School Administrators, with a t-value of 3.957 and a p-value of 0.000, indicating a high level of statistical significance at 0.01. Supportive leadership also emerged as a crucial factor, ranking second with a t-value of 3.501 and a p-value of 0.001.

From the analysis, the regression equation is:

Y= .675 + .416 (X1) + .357 (X2)

Where:

Y= Digital Fluency of School Administrators

X1= Work Adaptability in terms of Problem- Solving Skills

X2= Leadership Competence in terms of Supportive Leadership

The importance of problem-solving skills in enhancing work adaptability is highlighted by Mehrotra (2023), who explains that good problem-solving skills help school leaders manage changing situations and use technology effectively. This means leaders who can solve problems well are better equipped to guide their schools through challenges while making the most of technological tools. Similarly, Guncavdi-Alabay (2023) demonstrates that supportive leadership fosters a collaborative environment where technological resources can be utilized efficiently. Raptis (2022) highlights that strong digital fluency among school leaders enhances instructional practices, positively influencing student learning outcomes. The study of Maala and Lagos (2020) found that the level of technological leadership of school heads significantly influences teachers' ability to integrate technology into their teaching practices, thereby enhancing overall school performance. They assert that strong leadership competencies correlate with improved school performance and successful technology integration.

The study by Cortellazzo, Bruni, and Zampieri (2019) emphasizes that focusing on digital skills can lead to neglecting essential interpersonal skills crucial for effective leadership in a digitalized world. Likewise, Adie et al. (2022) stress that while being a strong digital leader is essential, we still need strong interpersonal skills to build teamwork and trust. Carrington (2021) also suggests that focusing solely on technological integration without considering broader educational goals may lead to a fragmented approach to school improvement.

Day (2016) further argues that while effective principals are vital for student success, it is essential to consider the unique contexts of each school rather than focusing exclusively on specific competencies. Their research indicates that effective principals possess critical leadership skills and adapt their strategies to meet the diverse needs of their students and staff.

Amidst this, the Wallace Foundation (2023) notes that effective principal leadership in virtual environments is crucial for fostering student engagement and achievement. Hamzah et al. (2021) support this view, asserting that principals must demonstrate how to use technology in their daily administrative tasks to encourage teachers to adopt it.

This study highlights that equipping school administrators with strong problem-solving skills and supportive leadership abilities is crucial for fostering a thriving educational environment. As technology plays a significant role in education, leaders who can think critically and support their staff will be better positioned to enhance student engagement and achievement. Implementing focused training to enhance these skills can also lead to stronger relationships among staff, creating a sense of shared purpose and accountability that enriches the overall educational experience and encourages continuous improvement within the school.

CONCLUSION

Based on the findings of the study, the following conclusions were drawn:

The findings reveal that the school administrators in the study possess strong work adaptability skills, particularly in problem-solving, flexibility, and learning orientation, which are categorized as "Highly Practiced." They also demonstrate high levels of leadership competence, including supportive, decision-making, and visionary abilities, resulting in "Strong Leadership". This suggests that the administrators have the necessary foundation to direct the changing educational setting and effectively utilize technology. The digital fluency exhibited by school administrators has been described as 'Fluent' in their utilization and integration of educational technology, reflecting their proficiency in managing the digital landscape to enhance educational outcomes.

The correlation analysis further supports the close relationship between work adaptability, leadership competence, and digital fluency. The data show a strong positive correlation between work adaptability and problem-solving skills, indicating that their digital fluency increases as administrators' work adaptability and leadership skills improve. The regression analysis delves deeper into these relationships, identifying problem-solving skills and supportive leadership as the most significant predictors of administrators' digital fluency. This emphasizes the crucial role of problem-solving abilities in empowering leaders to tackle challenges and leverage technology effectively. Additionally, the importance of supportive leadership suggests that creating a collaborative and resource-rich environment is essential for facilitating the adoption and integration of digital tools and practices.

RECOMMENDATIONS

Based on the findings and conclusions of this study, the following recommendations are presented:

The Department of Education may prioritize comprehensive capacity-building initiatives for school administrators to enhance work adaptability. This can be achieved through structured professional development programs that include workshops, seminars, and continuous training to improve accountability, work ethics, and authority. Such programs should emphasize personal growth and professional development to ensure consistent performance across all levels of administration.

The government may implement regular leadership training sessions for school administrators to enhance their competence in effective decision-making, communication, and strategic planning. These sessions can include workshops, seminars, and mentorship programs designed to develop critical leadership skills and best practices. Integrating these leadership development initiatives into the school curriculum and ongoing professional development programs will empower leaders to make informed, impactful decisions that benefit their schools and communities.

School administrators may receive targeted training in digital fluency to effectively leverage technology in their leadership roles. This includes understanding digital tools that can facilitate communication, data analysis, and instructional support. By enhancing their digital competencies, administrators can better navigate the complexities of modern educational environments.

Encouraging collaboration among teachers and staff is vital for building a supportive school culture. Administrators should create opportunities for professional learning communities (PLCs) where educators can share best practices, discuss challenges, and collectively work towards common goals. This collaborative approach will enhance teacher and staff morale and improve student outcomes through shared expertise.

By implementing these recommendations, stakeholders can significantly enhance school administrators' work adaptability and leadership competence, improving their digital fluency. This holistic approach will better equip administrators to meet the evolving demands of their roles and foster an environment that supports staff development and student success.

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