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SHAPING A CULTURE OF INNOVATION: SCHOOL HEADS STANDPOINT ON EDUCATIONAL TECHNOLOGY INTEGRATION

Stella Marie Q. Bernal[1]
[1]*Student, Graduate School, Rizal Memorial Colleges, Inc.*

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ABSTRACT

In the rapidly evolving landscape of education, technology has become an integral tool for enhancing teaching and learning experiences. From interactive digital resources to online collaboration platforms, educational technology offers boundless opportunities to engage students, personalize learning, and promote critical thinking skills. The primary purpose of this study is to explore the perspectives of school heads, particularly principals and administrators, on the integration of educational technology and their role in fostering a culture of innovation within their institutions. Utilizing a qualitative research approach, particularly employing the phenomenological research method, offers a unique opportunity to delve deeply into the perspectives of school principals regarding the establishment of a culture of innovation and the integration of educational technology within their institutions. Phenomenology, as a philosophical framework, focuses on understanding the essence of human experiences and the subjective meanings individuals attribute to those experiences. A total of ten participants are selected for this study, with five participating in in-depth interviews (IDI) and the remaining five taking part in focus group discussions (FGD). The findings related to the positive impact of educational technology on teaching and learning carry significant implications for policy development, educational practice, and future research. Moreover, Students with diverse needs benefit significantly from personalized learning opportunities enabled by technology. The use of assistive tools should be encouraged, ensuring that all students, regardless of their learning challenges, can access quality education.

KEYWORDS- *Shaping a Culture of Innovation, School Heads Standpoint, Educational Technology Integration*

INTRODUCTION

In the rapidly evolving landscape of education, technology has become an integral tool for enhancing teaching and learning experiences. From interactive digital resources to online collaboration platforms, educational technology offers boundless opportunities to engage students, personalize learning, and promote critical thinking skills. Looking ahead, as educational institutions navigate the complexities of the digital age, the role of school principals in driving innovation and technology integration is increasingly vital. Principals serve as visionary leaders who set the tone for their school communities, inspire educators, and champion innovative practices that empower students to thrive in a digital world.

Despite the growing emphasis on educational technology integration, there remains a significant research gap concerning school principals' perspectives on building a culture of innovation in this context. While numerous studies have explored the impact of technology on teaching and learning outcomes, fewer have specifically focused on the role of school principals in fostering a culture of innovation related to educational technology integration. Understanding principals' perspectives, strategies, and challenges in this area is crucial for developing effective policies and practices that support innovation in education.

In Malaysia, school heads play a crucial role in promoting teachers' competence in technology integration, positively impacting educational technology integration in schools. School heads technology leadership is important in integrating technology in teaching and learning. There is a positive relationship between headmaster technology leadership and teacher competence in technology. When a School heads champions' technology use, it sends a clear message to teachers about its importance. This can motivate teachers to learn new skills and explore ways to integrate technology into their lessons. A School heads who understands technology and its potential can create a school culture that encourages experimentation and collaboration. This can help teachers feel comfortable trying new things and seeking help from their colleagues (Ahmad &Husnin, 2022).

In addition to examining the role of school heads, the study of Gültekin & Hamutoglu (2020) delves into the challenges and opportunities presented by technology integration in educational settings. It explores how technology can enhance administrative tasks, streamline communication, and facilitate data-driven decision-making processes. Furthermore, it investigates the implications of technology integration for student learning outcomes and teacher professional development. Through case studies and empirical research, the paper provides insights into best practices for effectively integrating technology into educational administration to promote organizational effectiveness and student success.

Also, McLeod & Richardson (2021) emphasize that principals play a crucial role in navigating the complex challenges of technology implementation in schools. The article explores the barriers that principals face, such as balancing competing priorities, managing tight budget constraints, and addressing the varying levels of teacher readiness to adopt technology. These barriers often make it difficult for school leaders to fully realize their vision for

digital transformation. However, the authors stress that effective principal leadership is essential in overcoming these obstacles. Principals must advocate for adequate technological infrastructure and ensure that resources are allocated efficiently to support long-term digital integration.

Another research further reveals that principals who demonstrate a clear vision for instructional leadership are better positioned to guide technology integration within their schools. Their leadership behaviors—such as fostering collaboration, encouraging professional development, and providing ongoing feedback—create an environment where teachers feel supported in adopting new technologies. Personal attitudes towards technology also play a significant role; principals who are open to innovation and actively engage with digital tools themselves tend to inspire greater confidence and enthusiasm among their staff. Moreover, external support structures, such as government policies and funding programs, significantly influence principals' ability to implement technology. The study highlights that principals who leverage these external resources—whether through partnerships, grants, or government-backed initiatives—are more likely to succeed in embedding technology into their schools' culture. Principals who align their schools' goals with national or regional technology standards not only receive more support but also create a more cohesive and strategic approach to tech integration. The study concludes that strong instructional leadership, positive attitudes towards technology, and effective use of external support collectively enhance principals' ability to drive meaningful, sustained technological innovation in education (Afshari et. al, 2019).

Another study from Ertmer& Ottenbreit-Leftwich (2020) further underscores that for school leaders to effectively champion technology integration, they must first cultivate their own technology competencies. By developing a solid understanding of digital tools and their educational applications, principals can provide more informed guidance to teachers and staff during the adoption process. Their expertise enables them to identify the most appropriate technologies that align with specific pedagogical goals, ultimately enhancing teaching and learning experiences. Additionally, the paper highlights the importance of principals modeling effective technology use in their own practices. When school leaders demonstrate confidence and proficiency with technology, it not only builds credibility but also encourages teachers to embrace digital tools in their classrooms. Furthermore, principals are instrumental in facilitating professional development opportunities that are tailored to teachers' needs, ensuring that staff feel equipped and supported as they navigate new technologies.

Meanwhile, school heads in the Philippines specifically in Iligan City wield significant influence in driving ICT integration within educational frameworks. Their leadership is pivotal in orchestrating the various facets essential for successful implementation, including not only providing robust infrastructure but also facilitating comprehensive teacher training and seamless curriculum integration. The paper underscores the imperative for proactive policy measures tailored to foster ICT integration throughout the Philippine educational system. Such policies should prioritize equitable access to technology, promote digital literacy among educators and students, and encourage innovative teaching methodologies that harness the power of ICT tools. Additionally, the paper underscores the broader significance of ICT in education, highlighting its profound impact on enhancing the competitiveness of both individuals and the nation as a whole in the global arena. By embracing ICT as a catalyst for educational advancement, the Philippines can position itself at the forefront of innovation and knowledge-driven economies, thereby unlocking new opportunities for socio-economic growth and development (Tomaro, 2018).

Likewise, Hero (2019) aimed to assess the influence of integrating technology on teaching performance. The results indicate that Social Studies educators demonstrate a significant level of incorporating technology into their teaching practices, and their performance is rated highly satisfactory. The integration of technology in teaching significantly contributes to the overall teaching performance of Social Studies instructors. Additionally, productivity and professional practice emerged as notable predictors of technology integration. Teachers perceive a substantial level of technology integration in their Social Studies instruction, showcasing proficiency in utilizing technology within the classroom setting. Consequently, integrating technology into teaching is not merely a matter of complying with DepEd regulations but is viewed as a pedagogical innovation within the educational paradigm.

Through a future-oriented lens, this research aims to enrich the ongoing discourse on educational innovation and technology integration by examining the crucial role of school principals. By investigating principals' perspectives on the integration of educational technology, the study seeks to uncover their vision, strategies, and the challenges they face in fostering a culture of innovation within their schools. These insights are pivotal, as principals are the key drivers of school-wide change and their leadership directly impacts the success of technology adoption.

LITERATURE REVIEW

Alajmi (2022) emphasizes that while school principals are pivotal stakeholders in advancing digital leadership within schools, many lack sufficient training and confidence in utilizing technology effectively. This gap in their own digital competencies can impede their ability to lead technology integration efforts or to fully support teachers in adopting digital tools. To address this, it is crucial that principals not only embrace digital leadership themselves but also actively foster an environment where teachers are empowered and equipped to use technology in meaningful ways. One effective strategy is to provide comprehensive, ongoing training programs for both principals and teachers. By offering professional development opportunities focused on digital leadership and instructional technology, schools can enhance the proficiency of educators at all levels. Such training would enable teachers to integrate digital tools seamlessly into their classroom practices, aligning technology use with pedagogical goals to

improve student learning outcomes. In turn, principals who are well-versed in technology can offer more informed guidance, monitor progress more effectively, and cultivate a culture of innovation within their schools.

In addition, Christopoulous & Sprangers (2021) highlight the imperative for principals to acquire essential digital literacy skills to provide effective leadership for both students and teachers. As digital tools become integral to modern education, principals must lead by example, demonstrating proficiency in digital technologies and guiding their schools through the complexities of integration. It is their responsibility to ensure that teachers have access to the necessary resources—such as up-to-date technology, training, and support—to deliver high-quality instruction that meets the demands of the digital age. By equipping teachers with these tools, principals can help raise the level of instruction, which directly contributes to improved academic outcomes for students. Furthermore, principals must not only support others but also take personal initiative to inspire themselves as forward-thinking leaders. In a world where technological advancements are rapidly changing the educational landscape, it is essential for principals to stay ahead of the curve. This forward-looking approach allows them to anticipate challenges, embrace innovation, and create a vision for their schools that fosters a culture of continuous improvement and digital readiness.

Moreover, Ugur and Tugba (2019) suggest that the inadequate incorporation of technology in schools may be attributed to ineffective leadership. Further research is necessary to investigate the reasons behind the lack of comprehension among certain school administrators regarding the current necessity of technology for both educators and students, as well as its crucial advantages for the labor market. This study examines multiple aspects associated with digital leadership in principals. The parameters encompassed in this context are professional excellence, ongoing enhancement, digital citizenship, a culture of learning in the digital age, and visionary leadership.

Anderson & Dexter (2015) highlight that principals are not only responsible for providing the necessary resources but also for shaping the attitudes and beliefs of teachers towards technology integration. Their leadership sets the tone for how technology is perceived and used within the school. By articulating a clear vision for technology use, principals can align school-wide goals with instructional practices, ensuring that technology becomes an integral part of the learning process. Moreover, principals who promote a collaborative environment, where teachers can share experiences and strategies related to tech integration, foster a sense of ownership and innovation among staff. They also play a pivotal role in mitigating challenges, such as resistance to change or lack of confidence in using digital tools, by offering ongoing support and facilitating access to professional development opportunities tailored to enhancing digital competencies. In essence, principals who demonstrate strong, forward-thinking leadership significantly contribute to the successful, sustainable integration of technology in the classroom.

Furthermore, Buchholz et al. (2020) stress that in today's rapidly evolving educational landscape, the integration of technology is not just a supplementary tool but a fundamental necessity for effective teaching and learning. In order to meet the growing demands of modern education, educators are urged to make deliberate, continuous efforts to incorporate technology into their instructional practices. This goes beyond the occasional use of digital tools and instead requires an intentional approach where technology is seamlessly woven into everyday lessons to enhance learning outcomes. By doing so, teachers can foster more dynamic classrooms that support active learning, encourage collaboration, and promote critical thinking skills, all of which are essential for preparing students to succeed in a technology-driven world. For this to occur successfully, school administrators play a pivotal role in laying the groundwork. They must ensure that teachers have access to the necessary technological resources—such as updated hardware, reliable software, and robust internet connectivity—to facilitate the integration of digital tools in the classroom. Without these foundational elements, teachers are unable to effectively engage with technology or provide their students with the opportunities to do so.

Meanwhile, in Marikina City, displayed a commendable level of technological leadership, teachers' integration of technology in their classrooms showed varying levels of effectiveness. The study revealed that despite the strong leadership in technology, some teachers faced challenges such as limited digital literacy, lack of confidence in using advanced technological tools, and inconsistent access to resources. This gap between leadership and classroom implementation highlighted the need for more targeted professional development and support systems to bridge the divide. The findings also suggested that the alignment between school heads' vision for technology and teachers' practical application could be improved through continuous dialogue, mentorship, and collaborative efforts, ensuring that the leadership's technological strategies are fully realized in day-to-day teaching practices. Additionally, this study underscored the importance of fostering a shared culture of innovation, where both administrators and teachers work together to achieve seamless technology integration that enhances student learning outcomes.

Another study of Quidasol (2020) also emphasizes that while the DepEd Computerization Program (DCP) has made significant strides in providing technological resources to schools in Laguna, the moderate level of ICT integration by teachers indicates that more support is needed to fully maximize these tools. The study suggests that the mere presence of ICT infrastructure does not automatically translate into enhanced teaching and learning outcomes. For ICT integration to reach its full potential, there must be a deliberate effort to align technology use with pedagogical goals. Additionally, the finding that no significant relationship exists between school heads' technology leadership and teachers' ICT integration points to the need for a more cohesive approach, where school leadership actively collaborates with teachers to foster a shared commitment to technology-driven education. Quidasol further recommends that school heads should develop clearer technology visions and strategic plans to guide ICT adoption.

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Continuous ICT upskilling for both teachers and administrators, particularly recipients of the DCP, is crucial to building long-term capacity and sustaining technology integration in classrooms.

Pilongo (2019) further emphasizes that teachers are at the forefront of ensuring successful technology integration in classrooms, but their effectiveness largely depends on the support provided by school leadership. Principals who actively create time and allocate resources for innovation demonstrate a commitment to fostering a technology-rich learning environment. By offering incentives to "early adopters," principals not only encourage experimentation but also set a positive example that can influence more hesitant teachers to follow suit. Principal visibility—through regular classroom visits, offering constructive feedback, and recognizing teachers' efforts in integrating technology—strengthens the relationship between leadership and instruction. Additionally, consistent support from school leaders can alleviate teachers' concerns, making the process of adopting new tools less overwhelming. Pilongo argues that principals must actively work to identify and eliminate barriers—such as insufficient access to technology, lack of training, or outdated infrastructure—that may impede teachers' progress. Without these efforts, teachers may quickly lose motivation or become disillusioned by unrealistic technology expectations, jeopardizing the school's long-term goals for digital transformation. Ultimately, principals' ongoing involvement, clear communication, and strategic leadership are crucial in sustaining meaningful technology integration across classrooms.

Research Questions

This study seeks to explore the lived experiences, challenges, and triumphs of teachers involved in the implementation of child protection policies.

This study seeks to uncover insights into their vision, strategies, and challenges in building a culture of innovation. Understanding principals' perspectives can inform the development of targeted interventions and support mechanisms to facilitate effective technology integration initiatives.

1. What are the experiences of school principals regarding the implementation and integration of educational technology?
2. How do school principals address challenges and barriers encountered during the adoption and utilization of educational technology?
3. How do school principals promote and sustain innovation through the strategic implementation of educational technology, and what key insights have they gained from this experience?

METHODOLOGY

Research Design

Utilizing a qualitative research approach, particularly employing the phenomenological research method, offers a unique opportunity to delve deeply into the perspectives of school principals regarding the establishment of a culture of innovation and the integration of educational technology within their institutions. Phenomenology, as a philosophical framework, focuses on understanding the essence of human experiences and the subjective meanings individuals attribute to those experiences.

By employing phenomenological methods, researchers can explore the lived experiences of school principals within the context of educational policy and technological integration. This approach allows for a nuanced understanding of how principals perceive and navigate the complexities of fostering innovation and leveraging technology to enhance teaching and learning outcomes.

Through in-depth interviews or focus group discussions, researchers can delve into the rich narratives of school principals, capturing their unique perspectives, challenges, successes, and aspirations related to building a culture of innovation. Phenomenological research methods facilitate the exploration of the underlying meanings and motivations that drive principals' decision-making processes and actions in the realm of educational technology integration.

Furthermore, phenomenology offers a valuable lens for examining the subjective realities of school leaders within the broader socio-cultural and organizational contexts of their schools. By uncovering the lived experiences of principals, researchers can identify common themes, patterns, and insights that inform policy recommendations, professional development initiatives, and strategic planning efforts aimed at promoting innovation and technology integration in education.

Also, employing a phenomenological research approach enables researchers to gain a comprehensive understanding of school principals' perspectives on building a culture of innovation and educational technology integration, thereby contributing to the advancement of knowledge and practice in educational leadership and policy. This approach prioritizes the lived experiences of school principals, allowing researchers to capture the nuances of their thoughts, feelings, and actions in relation to technology integration.

Research Participants

The research employs purposeful sampling to select school principals from a diverse array of educational settings, ensuring a comprehensive representation of perspectives. This sampling strategy aims to capture a wide range of experiences and viewpoints regarding educational technology integration and the cultivation of a culture of

innovation within schools. The sample size is determined based on the principle of data saturation, where additional participants are unlikely to provide new insights or information. Typically, the sample size ranges from 8 to 15 participants, ensuring depth and richness in the data collected.

School principals are contacted through email or phone and provided with detailed information about the research objectives, procedures, and confidentiality protocols. They are invited to participate voluntarily, and informed consent is obtained from interested participants before proceeding with data collection.

A total of ten participants are selected for this study, with five participating in in-depth interviews (IDI) and the remaining five taking part in focus group discussions (FGD). Both IDIs and FGDs offer unique advantages: IDIs allow for in-depth exploration of individual experiences and perspectives, while FGDs facilitate group dynamics and the exchange of ideas among participants.

Research Instrument

To gain a deeper understanding of how school heads perceive and influence the integration of educational technology in their respective schools, a semi-structured interview guide was developed as the primary research instrument for this qualitative study. The use of a semi-structured format allowed the researcher to explore key themes while maintaining the flexibility to probe further based on participants' responses, ensuring rich, nuanced data collection.

Each interview began with general, rapport-building questions, followed by core open-ended questions designed to elicit detailed narratives, opinions, and reflections.The instrument was validated through expert consultation involving two educational researchers and one experienced school administrator, who reviewed the guide for clarity, relevance, and alignment with the study’s aims. Revisions were made based on their feedback to ensure the questions were contextually appropriate and capable of eliciting comprehensive insights from the participants.

To ensure ethical research conduct, participants were informed of the purpose of the study, their voluntary participation, and confidentiality measures. With consent, all interviews were audio-recorded and later transcribed for analysis.

This research instrument was vital in capturing the lived experiences and leadership perspectives of school heads, which ultimately provided meaningful insights into the development of a culture of innovation within educational institutions..

Data Analysis

The data that will be collected during the interview will be analyzed using phenomenological analysis techniques, which involve a systematic exploration of the lived experiences described by participants. Researcher engage in a process of bracketing, setting aside preconceptions and biases to focus solely on the participants' accounts. Through a process of thematic coding and interpretation, researchers identify common patterns, themes, and essences that emerge from the data, capturing the shared lived experiences of stakeholders.

Creswell (2013) outlines six crucial stages in qualitative data analysis that are necessary for assessing and interpreting published research findings in the realm of education. These stages provide a comprehensive framework for systematically analyzing qualitative data.

The first stage involves organizing and preparing the data for analysis, which includes transcribing interviews, scanning material, and sorting and arranging the data into different types depending on the sources of information. The second stage consists of reading through all the data to obtain a general sense of the information and reflect on its overall meaning.

In the third stage, a detailed analysis begins with the process of coding the data. Coding involves organizing the material into segments of text before bringing meaning to information.

RESULTS AND DISCUSSION

This chapter explores the broader implications of the findings discussed in the previous chapters and outlines potential directions for future research and practice in the field of child protection within educational settings. The insights gained from the study underscore the critical role of teachers, school administrators, and other stakeholders in safeguarding the well-being of children.

Implications

Main Theme 1: Positive Impact of Educational Technology on Teaching and Learning

The findings related to the positive impact of educational technology on teaching and learning carry significant implications for policy development, educational practice, and future research. From a policy perspective, decision-makers should prioritize evidence-based technology investments, focusing resources on solutions that demonstrably enhance teaching performance and improve student outcomes.

Main Theme 2: Enhancing the Integration of Educational Technology
The theme of enhancing educational technology integration highlights the need for systematic approaches to implementation at the policy, practice, and research levels. Policy implications include the establishment of comprehensive support systems that provide the necessary technical infrastructure, ongoing professional development opportunities, and responsive technical assistance. Funding models should evolve to encourage resource sharing and collaborative technology implementation across educational institutions, maximizing the impact of available resources. Clear standards for technology integration should be developed that align with teacher evaluation frameworks and professional growth pathways, providing coherent guidance for educators and administrators.

Main Theme 3: Leading and Sustaining Technology-Driven Innovations in Education
The findings related to leadership and sustainability of technology innovations have profound implications for ensuring long-term success of educational technology initiatives. At the policy level, there is a need for requirements that mandate educational technology plans demonstrating clear alignment with broader educational objectives and institutional missions. Funding approaches should evolve to recognize technology as an ongoing operational expense rather than a one-time capital investment, providing sustainable resources for maintenance, upgrades, and continued professional development. Strategic investment in preparing school leaders with the knowledge and skills necessary to effectively lead technology implementation will be essential for widespread, successful integration.

Future Directions
As educational technology continues to evolve, it is crucial to explore innovative ways to enhance its integration across schools and institutions. Future research and practice should focus on addressing the barriers identified in current studies, such as inadequate infrastructure, insufficient training, and unequal access to resources, to ensure that all educators and students can fully benefit from the potential of technology. Additionally, as technology advances, the development of more personalized learning tools, AI-driven resources, and interactive platforms should be prioritized to cater to diverse learning needs and foster deeper engagement.

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