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Exploring Digital Leadership Readiness Among School Heads in Castilla West

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ABSTRACT

This study explored the digital leadership readiness of school heads in the Castilla West District, focusing on their perceived preparedness, demonstrated ICT competencies, and the contextual factors influencing their capacity to lead schools toward effective digital transformation. Using a qualitative approach, the study examined how school leaders understand, apply, and navigate digital practices within their administrative and instructional responsibilities.

Findings indicate that school heads demonstrate a developing yet steadily improving level of digital leadership readiness. They show strong motivation to integrate technology into school management and confidently use digital communication platforms to coordinate tasks, disseminate information, and lead instructional and operational processes. They also utilize various digital tools including Google Workspace, Microsoft Office applications, DepEd information systems, learning platforms, and communication technologies to streamline workflows and support school-wide digital initiatives, reflecting their commitment to becoming effective digital-age leaders.

However, several challenges constrain their readiness. Many school heads lack advanced technical skills and have limited access to sustained hands-on ICT training, resulting in reliance on more technologically skilled staff for complex tasks. Persistent infrastructural issues, such as unstable internet connectivity, outdated equipment, and the absence of ICT support personnel, further hinder the full integration of digital innovations.

Despite these limitations, the school heads have made significant progress. They have shifted from manual to more systematic digital processes, improved communication efficiency, and strengthened teacher engagement in technology use. Institutional support from DepEd and LGUs, along with strong personal motivation, serve as critical enablers of their digital leadership efforts.

The study recommends a digital leadership framework anchored on five key elements: a shared digital vision, continuous ICT capacity-building, reliable infrastructure, ethical and inclusive digital practices, and a collaborative digital culture.

Keywords: Digital leadership readiness; school heads; ICT competence; digital transformation; institutional support; educational leadership; Castilla West District; digital framework; qualitative research.

CHAPTER I
THE PROBLEM AND ITS SETTING
INTRODUCTION

The educational landscape in the 21st century has evolved rapidly as digital technologies become increasi

ngly embedded in everyday life. In schools, this shift has transformed how administrators manage operations, how teachers deliver instruction, and how learners access and engage with information. As these changes unfold, the role of school heads has expanded beyond traditional managerial and supervisory functions. They are now expected to navigate the complexities of a digital environment, lead technology-driven initiatives, and ensure that their schools are responsive to emerging educational demands. In the context of Castilla West, these expectations highlight the growing importance of assessing how prepared school leaders are to embrace digital transformation both in terms of their technical competence and their ability to guide their institutions toward effective and meaningful technology integration.

In this rapidly evolving context, school heads must demonstrate more than just managerial competence; they are called upon to lead transformational change that bridges traditional education with the demands of the digital era. The growing dependence on technology for curriculum delivery, assessment, communication, and administrative efficiency underscores the need for school leaders who possess a robust set of digital competencies, a strategic understanding of ICT integration, and the adaptive mindset necessary to lead in uncertain, complex digital environments (Håkansson et al, 2019; Davies, 2010). As digital tools become indispensable in education, the concept of digital leadership readiness has emerged as a crucial determinant of school success, affecting not only the implementation of technology but also the broader vision, culture, and capacity for innovation within schools (Dexter, 2018).

Digital leadership, in this study, is defined as the ability of school leaders to use digital tools and technological knowledge to support teaching and learning, streamline administrative operations, promote professional development among teachers, and foster a forward-thinking school culture that embraces innovation and change (Ng, 2015). This leadership involves making informed decisions about digital resources, modeling the ethical and effective use of technology, and building school-wide systems that support digital learning. It also includes supporting teacher capacity, ensuring access to digital infrastructure, and involving stakeholders in a shared vision for digital transformation (Anderson & Dexter, 2005).

In the case of the Castilla West District, like many other districts in the Philippines, the transition to a digitally responsive educational system presents both opportunities and challenges. While the national government, through the Department of Education, continues to promote ICT integration in schools, actual implementation varies across regions and depends heavily on school leadership (DepEd, 2020). School heads in Castilla West must contend with diverse issues such as limited access to digital tools, varying levels of digital literacy among staff, inconsistent internet connectivity, and a need for sustained professional development programs (Madriaga & Peralta, 2022). These challenges highlight the urgent need to assess how prepared school leaders are to meet the demands of digital leadership and how their readiness influences the overall progress of digital transformation within their institutions.

This study, therefore, explored the digital leadership readiness of school heads in Castilla West District by examining their competencies, attitudes, experiences, and perceived challenges in leading digital initiatives. It also seeks to identify institutional supports or barriers such as training opportunities, policy support, infrastructure availability, and stakeholder engagement that either facilitate or hinder their readiness. Through a qualitative investigation grounded in real-world experiences, the study aims to generate valuable insights that can inform district-level policies, guide capacity-building programs, and contribute to the creation of more responsive and future-oriented leadership frameworks (Leithwood et al., 2020). Ultimately, this research intends to support the broader goal of achieving digital equity and innovation across schools in Castilla West and beyond.

SETTING OF THE STUDY

This study was conducted in the Castilla West District**,** located in the municipality of Castilla, province of Sorsogon. The respondents of the study include 13 school heads from public elementary and secondary schools within the district. This study explored their readiness for digital leadership by examining their professional background, technological exposure, digital practices, and leadership competencies in the context of a rapidly evolving digital education landscape.

The Castilla West District is one of the three educational districts in Castilla, a municipality situated in the western part of Sorsogon province in the Bicol Region. Castilla is bounded by Manito, Albay to the north, the municipality of Pilar to the west, Sorsogon Bay to the south, and the City of Sorsogon to the east. It is strategically located between two major urban centers Legazpi City (38 kilometers away) and Sorsogon City (22 kilometers away) providing access to regional resources and infrastructure.

The district includes several barangays characterized by a diverse landscape of coastal, lowland, and upland areas. These geographical features contribute to the varying levels of access to digital resources and infrastructure among schools, which may influence the digital leadership capacity of school heads.

As part of a geographically and socio-culturally diverse community, the Castilla West District presents a unique setting to examine how school leaders adapt to the digital demands of 21st-century education. Their digital leadership readiness is crucial in guiding their respective schools toward innovation, digital transformation, and effective ICT integration in teaching and learning.

The cradle of Castilla could be traced back in antiquity. Bikol historians believed that Castilla had its humble beginnings at Bulabog (now a Barangay of Sorsogon City), which eventually evolved into a small town composed of nearby settlements of Inarihan, Capuy (former site of what is now Sorsogon City), Macalaya and Cumadcad. It was formalized as an independent town under the then “Provincia de Albay” (which at that time includes Sorsogon, Masbate and Catanduanes) in 1827. A wealthy Spaniard, Eugenio Santos Martinez, who became an influential figure of Bulabog at that time and a native of Castilla in Spain, recommended the transfer of the town’s seat of government to where it is now located, as well as, the naming of the place in honor of his hometown and the birthplace of Queen Isabella I, who reigned in Spain from 1451 – 1504. When Sorsogon became an independent province in 1894, Castilla was annexed as one of its towns.

Castilla is one of the coastal municipalities of the Province of Sorsogon, which is situated in the southernmost tip of Luzon. Castilla is flanked on the North by the Municipality of Manito, Albay, on its Western tip by the Municipality of Pilar, Sorsogon, on its Southern point by the Sorsogon Bay, and adjacent to its Eastern side is the City of Sorsogon. The seat of government is formerly at the Poblacion, some 4.5 kilometers from the National Highway, however, in 1968, under the auspices of the then Mayor Alejandro Lladones, for reasons of facility and ease of access to government official business, it’s gubernatorial seat was transferred at Cumadcad, an urbanizing barangay, which is traversed by the high voltage transmission lines coming from PNOC – EDC, Bacon – Manito and Leyte Geothermal Plants forming the Luzon Grid. Castilla is strategically situated midway between Legazpi City and Sorsogon City. It is 38 kilometers away from the Regional Center in Legazpi City and 22 kilometers from the City of Sorsogon.

Castilla’s topography is a combination of plains, mountains and sea, which may be characterized as distinctively varied and irregular landscape. While the Northern and Southern portions along the coastlines are mountainous and hilly, the rest is flat to rolling hills. Its climate is characterized by short dry season and pronounced maximum rainfall from November to January, in which matched with its homogeneous

Castilla Clay Loam soil type, makes the municipality ideal for farming and other agricultural crops such as palay, corn, varied root crops, abaca, coconut, and multifarious fruit-bearing trees.

Castilla has a total land area of 18,620 hectares comprising 8.71% of the total land area of the province of Sorsogon. The municipality is politically subdivided into thirty-four (34) barangays, three (3) of which are urbanizing: Poblacion, Cumadcad and Macalaya; thirteen (13) are located on its vast coastline; eleven (11) are lowland; and ten (10) are upland barangays. The following are the barangays of Castilla, in alphabetical order: Amomonting, Bagalayag, Bagong Sirang, Bonga, Buenavista, Burabod, Caburacan, Canjela, Cogon, Cumadcad, Dancalan, Dinapa, La Union, Libtong, Loreto, Macalaya, Maracabac, Mayon, Maypangi, Milagrosa, Miluya, Monte Carmelo, Oras, Pandan, Poblacion, Quirapi, Saclayan, Salvacion, San Isidro, San Rafael, San Roque, San Vicente, Sogoy, and Tomalaytay.

Castilla is home to Malawmawan Island, a major natural attraction of the locality with an area of 30.37 hectares located off the coast of barangays Buenavista and Macalaya. The island boosts of breath-taking view of the two most active volcanoes in the Bicol region. The Bulusan Volcano on the Eastern flank and Mayon Volcano on the North. From an aerial perspective, Malawmawan offers a panoramic view of its stingray-like shape during low tide, and a lush green round-shaped vegetation during high tide. The magnificent sand bar with its pearly white fine sands adorns its shores with crystal clear waters ideal for swimming, diving, skim boarding, and other sea adventures. It is also a haven for endemic and migratory birds, a place of bliss for nature lovers and adventurers. Other equally breath-taking destinations include: Salang Buaya in Quirapi; Bagalayag Cave; Kambal Halas Cave in Bagong Sirang; Cascading Waterfalls and Lake Buragwis in Canjela; Dulangan-Nasipit-Pili River traversing the barangays Poblacion, San Isidro and Libtong; and the Castilla Group of Islands along the coastal barangays, among countless others.

RESEARCH BACKGROUND

The digital transformation of education is no longer a matter of preference or innovation it has become an urgent and indispensable requirement for modern schooling. In today's fast-changing, technology-driven world, schools are expected to integrate digital tools and platforms not only into instructional delivery but also across the entire scope of school leadership and management. The rapid advancement of technology, along with global events such as the COVID-19 pandemic, has profoundly altered how schools operate. During the pandemic, education systems worldwide were forced to shift to remote and hybrid learning models almost overnight. This exposed significant gaps in technological readiness, particularly in leadership, and underscored the need for agile, visionary, and tech-savvy school heads who can lead their institutions effectively through uncertainty and digital disruption.

In response to these realities, global education systems including that of the Philippines are now placing stronger emphasis on digital leadership as a core competency for school administrators. The role of the school head has evolved from being a traditional instructional leader to becoming a digital change agent, capable of making strategic decisions about technology use, managing ICT resources, guiding teachers in digital pedagogy, and fostering a culture of innovation within the school community. Effective digital leadership also entails ensuring digital equity, promoting responsible use of technology, and continuously building the digital competence of both staff and students. Without such leadership, efforts to integrate technology often remain superficial, fragmented, or unsustainable.

Recognizing the importance of this shift, the Department of Education (DepEd) in the Philippines has initiated several national programs aimed at promoting Information and Communications Technology (ICT) integration in schools. These include the DepEd Computerization Program (DCP), the Digital Rise Program, and the integration of ICT in the Basic Education Curriculum. While these initiatives are

commendable, their implementation on the ground has been uneven. Many school heads, particularly those in rural and underserved areas, continue to face significant obstacles in leading digital transformation. Challenges such as limited digital infrastructure, inconsistent internet connectivity, inadequate access to capacity-building programs, and varying levels of digital competence among school leaders remain persistent barriers. As a result, school heads are often left to navigate the complexities of digital leadership with limited support and preparation.

In the context of the Castilla West District, these challenges are magnified. As a predominantly rural area in Sorsogon Province, many schools face logistical and financial constraints that make ICT integration more difficult. While some school heads have shown initiative by leading digital programs or embracing online platforms for communication and learning, much of this effort is anecdotal, informal, and unsupported by a systemic approach. There is currently a lack of empirical data or in-depth understanding of how prepared these school heads truly are to fulfill digital leadership roles. Questions remain about their perceived readiness, professional development experiences, digital competencies, and the institutional factors that support or hinder their effectiveness in this area.

Given this context, exploring the digital leadership readiness of school heads in Castilla West District is both timely and crucial. It is necessary to understand not just their current capabilities but also the real-world challenges they encounter, the resources they lack, and the types of support systems they believe are needed to thrive as digital leaders. This exploration can provide valuable insights for school divisions, policymakers, and educational training providers, enabling them to design targeted interventions that directly respond to the needs on the ground. By identifying gaps in skills, knowledge, and infrastructure, the findings of this study can inform professional development programs, guide the allocation of digital resources, and influence future policies that aim to build a more digitally resilient and future-ready educational leadership.

Ultimately, this study contributes to a broader understanding of what it takes to be an effective school leader in the digital age. In doing so, it supports the national agenda of transforming Philippine education through ICT and helps ensure that schools regardless of their geographic location are led by individuals who are prepared, empowered, and equipped to lead in a technologically advanced learning environment.

STATEMENT OF THE PROBLEM

This study explored the digital leadership readiness among school heads in Castilla West District. Specifically, it aims to address the following research questions:

1. How do school heads in Castilla West District perceive their level of digital leadership readiness?
2. How do school heads demonstrate their digital competency in managing their school?
3. What institutional and personal factors do school heads identify as influencing their readiness to lead in a digital environment?
4. What experiences have school heads encountered in implementing digital leadership practices in their school?
5. What digital leadership framework could be proposed to strengthen their digital leadership capacity?

RESEARCH OBJECTIVES

The general objective of this research is to explore the digital leadership readiness of school heads in Castilla West District.

Specifically, the study aimed to:

1. Assess the current level of digital leadership readiness as perceived by school heads.

2. Identify the digital competencies school heads possess and examine how these align with the needs of 21st-century school leadership.
3. Determine institutional and personal factors that influence school heads' digital leadership readiness.
4. Investigate the challenges and obstacles school heads encounter in implementing digital leadership practices.
5. Identify strategies, resources, and support systems that school heads perceive as necessary to enhance their digital leadership capacity.

RESEARCH ASSUMPTIONS

This study is guided by the following assumptions:

1. School heads possess varying levels of digital leadership readiness based on individual, institutional, and contextual factors.
2. Digital competencies are essential components of effective school leadership in the 21st century.
3. Institutional support, access to resources, and continuous professional development influence digital leadership readiness.
4. School heads face significant barriers, including technological, infrastructural, and capacity-related challenges, in implementing digital initiatives.
5. Strengthening digital leadership requires a holistic approach that includes training, policy support, and infrastructure enhancement.

SCOPE AND DELIMITATION

This study is confined to exploring the digital leadership readiness of public-school heads within the Castilla West District in Sorsogon, Philippines. It focuses on understanding how school heads perceive their own readiness to lead in a digital environment, the extent to which they demonstrated digital competencies, and how these competencies align with the demands of 21st-century school leadership. The study also examined the institutional and personal factors that may influence their readiness, such as access to technology, training opportunities, leadership experience, and attitudes toward digital transformation. Additionally, it investigates the challenges and obstacles that school heads encounter in the implementation of digital leadership practices, as well as the strategies, support systems, and resources they believe are essential for enhancing their digital leadership capacity.

The research is delimited to school heads, including principals and officers-in-charge, from public elementary and secondary schools within the Castilla West District. Other stakeholders such as teachers, students, non-teaching personnel, parents, and community members are not included as primary participants, although their perspectives may be indirectly reflected in the responses of the school heads. The scope of the study is also limited to the administrative and instructional dimensions of digital leadership, excluding highly technical aspects such as hardware maintenance, network infrastructure, and software development, which fall under the purview of ICT professionals.

While national policies and DepEd initiatives related to ICT integration and digital transformation may be referenced to provide context, the study primarily focuses on the local district-level implementation and experiences. The geographic scope is intentionally limited to Castilla West District to ensure a more in-depth, context-specific analysis. Furthermore, the study employs qualitative research methods, which are best suited for capturing the nuanced experiences, insights, and perceptions of participants. As such, the findings are not intended to be statistically generalized to other districts or regions but may offer valuable insights that can inform future research, policy development, and leadership training programs aimed at strengthening digital leadership in similar contexts.

Conceptual Framework

The Department of Education recognizes the critical role of digital leadership in driving school improvement and ensuring effective technology integration in education. This is especially vital in the current digital age, where school heads must be prepared to lead and manage digital initiatives for better educational outcomes. This study explored the digital leadership readiness of school heads in Castilla West District, which could serve as a basis for interventions to strengthen their capacity in digital leadership.

Figure 1 illustrates the conceptual framework of the study, composed of three main components: Input, Process, and Output. The Input component refers to factors influencing digital leadership readiness, such as leadership competencies, technology acceptance, and organizational readiness for digital change. The Process involves assessing these factors through surveys and interviews with school heads to understand their preparedness in leading digital transformation. The Output is the level of digital leadership readiness demonstrated by the school heads, which is expected to result in improved technology integration, enhanced school management, and promotion of innovation and equity in their schools.

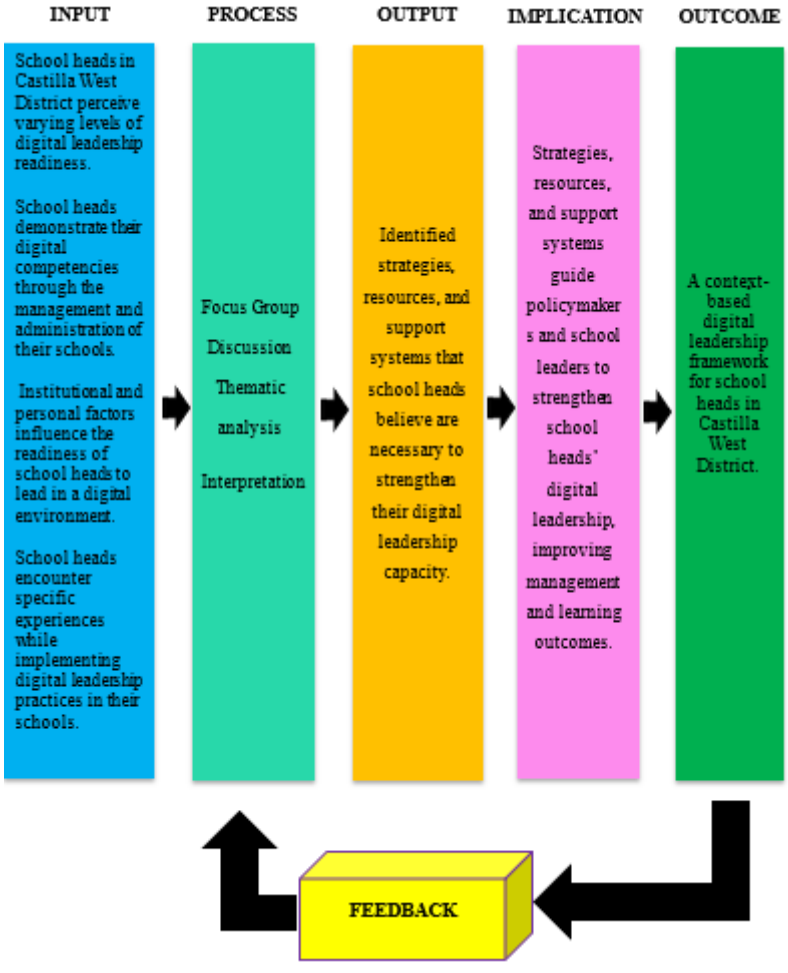

Figure 1 CONCEPTUAL PARADIGM

SIGNIFICANCE OF THE STUDY

This study is highly relevant and meaningful across several domains of education and among various key stakeholders. Its findings are expected to contribute to both theory and practice, particularly in the areas of educational leadership, digital transformation, and rural school development in the Philippine context.

Department of Education (DepEd): The results of this study can offer valuable data to policymakers and decision-makers within the Department of Education, particularly at the division, regional, and even

national levels. By identifying the specific challenges and needs faced by school heads in rural districts like Castilla West, the findings can inform the design and implementation of more responsive policies, training programs, and resource allocation strategies. These insights are crucial for ensuring that digital transformation efforts are inclusive, context-sensitive, and sustainable, especially in geographically isolated and disadvantaged areas.

Educational Technology Planners and Developers: For ICT program planners, education consultants, and digital learning advocates, this study provides firsthand insights into the real-world challenges and contextual barriers encountered by school heads in rural public schools. By understanding the ground-level realities, planners can design and implement ICT initiatives that are not only technically sound but also practically applicable, culturally appropriate, and sensitive to the infrastructure limitations of rural schools. This ensures that technology-based interventions are more likely to be adopted, maintained, and scaled effectively.

School Heads: For school leaders, this study serves as a reflective lens through which they can evaluate their own digital leadership readiness. It provides an opportunity for introspection, allowing school heads to better understand their current strengths and areas for improvement in terms of digital competence, strategic thinking, and technological adaptation. The insights gained from this study may encourage school heads to seek targeted professional development and adopt more forward-thinking leadership practices, ultimately helping them to lead more confidently and effectively in a digitally evolving educational environment.

Teachers and School Staff: Improved digital leadership at the school level directly impacts the teaching and learning environment. When school heads are digitally competent and visionary, they are more likely to provide meaningful support for ICT integration, promote ongoing teacher training, and foster a school culture that encourages innovation and collaboration. As a result, teachers and other staff can experience better access to digital tools, greater professional empowerment, and more structured opportunities to incorporate technology into their instructional practices, ultimately improving student outcomes.

Future Researchers: This study lays a solid foundation for further academic inquiry into the field of digital leadership in education, particularly in developing country settings like the Philippines. Future researchers may build upon its findings to conduct comparative studies, quantitative analyses, or case studies in different districts or regions. It may also inspire further exploration into leadership training models, digital equity in education, and the long-term impact of digital leadership on school performance and innovation. As such, the study contributes to the growing body of literature that bridges educational leadership, technology, and rural development.

In sum, this research has the potential to inform both practice and policy and to support the ongoing efforts toward a more digitally empowered, equitable, and future-ready education system in the Philippines.

DEFINITION OF TERMS

For clarity, consistency, and to ensure shared understanding, the following terms are defined operationally as they are used in this study:

Digital Leadership

Digital leadership refers to the capacity of school heads to effectively lead, manage, and sustain the integration of Information and Communications Technology (ICT) within various domains of the school system. It encompasses strategic decision-making, digital vision-setting, resource management, and the cultivation of a school culture that embraces innovation and continuous improvement through the use of digital tools. In this study, digital leadership involves the ability to guide teachers, staff, and students in

utilizing technology to enhance teaching, learning, and administrative processes, as well as in preparing schools to adapt to the challenges of a digital educational environment.

Readiness

Readiness, as used in this study, pertains to the perceived and actual level of preparedness of school heads to lead digital transformation initiatives in their respective schools. This includes their self-assessed confidence, technological skills, access to digital tools, openness to change, and willingness to engage in professional development. Readiness also involves their capacity to align digital leadership practices with the goals of the school, respond to emerging educational challenges, and foster an environment conducive to innovation and collaboration.

School Head

A school head refers to the individual holding the highest leadership position in a school, typically designated as principal or officer-in-charge. In the context of this study, school heads are the administrative and instructional leaders of public elementary and secondary schools within the Castilla West District. They are responsible for implementing educational policies, managing personnel, allocating resources, and ensuring quality teaching and learning. Their leadership plays a pivotal role in driving digital transformation and integrating ICT across school operations.

Information and Communications Technology (ICT)

Information and Communications Technology (ICT) encompasses a broad range of digital tools, resources, and systems that facilitate the acquisition, processing, storage, communication, and dissemination of information. In the educational context, ICT includes devices such as computers, tablets, interactive whiteboards, projectors, as well as software applications, internet platforms, and communication systems. In this study, ICT refers specifically to the technological infrastructure and tools used to support teaching, learning, school management, data handling, and communication within schools.

21st-Century Skills

21st-century skills represent a comprehensive set of knowledge, abilities, work habits, and character traits deemed essential for success in the modern world. These include but are not limited to digital literacy, critical thinking, problem-solving, creativity, collaboration, communication, adaptability, and social responsibility. For school heads, possessing 21st-century skills means having the ability to lead with innovation, manage change, and prepare learners to thrive in a global, interconnected, and technology-driven society. These skills are fundamental to exercising effective digital leadership.

Digital Competence

Digital competence is defined as the combination of knowledge, skills, attitudes, and behaviors that enable an individual to use digital technologies safely, efficiently, and responsibly. For school heads, this involves the ability to utilize digital tools for instructional leadership, data management, professional communication, and decision-making. It also includes ethical considerations such as data privacy, digital citizenship, and responsible use of technology. In this study, digital competence is seen as a core component of digital leadership readiness.

Exploring

In this study, exploring refers to a systematic and in-depth process of investigation aimed at understanding the multifaceted aspects of school heads' digital leadership readiness. It involves actively seeking out, examining, and analyzing experiences, perceptions, behaviors, and practices of school heads to gain comprehensive insights. This process allows researchers to uncover underlying factors, patterns, and relationships that influence how school leaders adopt, utilize, and integrate digital tools and strategies in

managing their schools. Exploring, in this context, is not limited to observation but extends to critical reflection, comparison, and synthesis of findings to develop a deeper understanding of effective digital leadership practices in educational settings.

Digital

The term digital, in this study, encompasses the use, application, and integration of modern electronic technologies and tools in the school leadership and management context. It includes devices, software, platforms, and online systems that facilitate communication, data management, instructional leadership, and decision-making processes. Digital also refers to the adoption of innovative technological solutions that enhance efficiency, connectivity, and engagement within the school environment. In the context of school leadership, digital represents the evolving landscape of technology-driven practices that enable leaders to plan, implement, monitor, and evaluate educational programs, ensuring that their schools remain adaptive, competitive, and responsive to the demands of the 21st-century learning environment.

CHAPTER II
REVIEW OF RELATED LITERATURE AND STUDIES

This chapter presents the review of related literature and studies that will provide relevant information about the theoretical, conceptual and operational frameworks of the study. It also includes synthesis of the state-of-the art. The theories reflected in the different literature and studies will provide significant insights in the conduct of the study.

Foreign and Local Literature

For this study, the researcher considers both foreign and local published literature from online academic sources to provide recent, relevant, and comprehensive perspectives on digital leadership readiness among school heads. The selected studies reflect key aspects of digital transformation, leadership competencies, institutional challenges, and readiness for technology integration in education. These findings are essential to contextualize the investigation within the Castilla West District.

Willermark (2021) emphasized that the digitalization of schools is a multifaceted process involving infrastructure, pedagogy, administration, and professional development. Her systematic review from 2009 to 2019 revealed that while digital leadership is increasingly recognized as essential in guiding this transformation, there is still limited research detailing the specific competencies school leaders must possess. This gap directly relates to the current study, as understanding readiness in Castilla West involves identifying those same leadership competencies in a local setting.

López-Figueroa et al. (2025) conducted a narrative review of 25 peer-reviewed studies between 2020 and 2024 and identified major digital leadership trends such as rapid technology adoption, enhanced digital literacy, collaborative leadership practices, and the integration of AI in schools. The study also cited challenges like infrastructure limitations and resistance to change. These insights provide a useful benchmark for assessing the trends and obstacles facing school heads in Castilla West District.

In the context of Indonesia, Setia (2024) explored the post-pandemic shift in digital leadership roles among junior high school principals in Surabaya. His study concluded that principals must go beyond technical proficiency and assume transformative roles that include spiritual, emotional, and ethical leadership. This multidimensional approach aligns well with the Philippine context where values-based leadership is also emphasized, particularly in public school settings like Castilla West.

Another relevant study by Hamzah, Radzi, and Omar (2025) in Malaysia examined the competencies required for digital leadership in education. Their systematic review identified five core areas: strategic

vision, digital literacy, ethical governance, adaptability, and socio-technical integration. These competencies serve as a foundation for crafting assessment tools that can measure digital leadership readiness among school heads in Castilla West.

The aforementioned studies showed that digital leadership readiness involves competencies, institutional support, and technology integration. Willermark (2021) noted gaps in defining required skills, while López-Figueroa et al. (2025) highlighted trends like rapid technology adoption and AI integration alongside infrastructure challenges. Setia (2024) emphasized transformative, values-based leadership, and Hamzah, Radzi, and Omar (2025) outlined core competencies including strategic vision, digital literacy, ethical governance, adaptability, and socio-technical integration, providing a framework for assessing school heads' readiness in Castilla West.Suratman et al. (2023) explored the influence of digital leadership on educational transformation in Samarinda, Indonesia, particularly in Madrasah Aliyah schools. Their findings emphasized the importance of leadership in shaping infrastructure, promoting digital content, and fostering student creativity. Similar leadership influence is likely to exist in the Philippine educational setting, where school heads play a central role in implementing digital initiatives.

Akbari and Pratomo (2023) conducted a study on Indonesian higher education institutions during COVID-19, revealing that effective digital leadership requires not only infrastructure but also a shift in institutional culture and mindset. Although focused on universities, the core idea that leadership must guide both technical and human dimensions of change is directly applicable to public basic education settings in Castilla West.

In the UAE, Abuhassira, Razak, and Hoque (2024) examined how transformational leadership enhances teacher-student interaction in digital classrooms. Their findings revealed that school heads who exhibit visionary leadership and empathy can foster more effective technology adoption among teachers highlighting leadership readiness as a key enabler of educational success.

The study by Mushadi, Usman, and Bahrun (2024) in Aceh focused on how school heads' leadership strategies enhanced teacher digital competencies. By promoting professional development and collaborative support, effective leaders helped schools better navigate the shift to digital pedagogy. Castilla West school heads are similarly positioned to influence teacher readiness and digital engagement. Meanwhile, in the context of private schools in West Java and Jakarta, Santoso et al. (2024) found that leadership plays a critical role in fostering institutional culture and digital maturity. Through a mixed-methods study, they confirmed that leadership readiness significantly affects schools' ability to navigate digital transformation. This suggests that in Castilla West, leadership may likewise serve as both a barrier and catalyst depending on readiness levels.

Several international studies emphasize the central role of school leadership in digital transformation. Suratman et al. (2023) found that school heads in Samarinda, Indonesia, shape infrastructure, promote digital content, and foster student creativity, suggesting that similar leadership influence likely exists in the Philippine context, where school heads are key drivers of digital initiatives. Collectively, these studies relate to Castilla West by emphasizing how leadership competencies, infrastructure, and collaborative support shape digital adoption. However, the difference lies in context: previous research focused on foreign or higher education settings, whereas Castilla West involves public basic education, where local socio-cultural, infrastructural, and institutional conditions may uniquely influence digital leadership readiness.

Yusmansyah et al. (2024) also highlighted the importance of leadership style, particularly transformational leadership, in improving teacher performance through digital means. Their research supports the idea that

leadership is not just about managing change, but also about inspiring and empowering others an essential consideration in evaluating school heads' readiness.

A local study by Reyes and Garcia (2023) on digital leadership in DepEd schools in Region V found that many school heads were willing but lacked access to training and technological resources. Their study emphasized the role of DepEd policy in shaping readiness and providing equitable support a condition similarly observed in the Castilla West District.

Alawiah and Tukiran (2023) conducted a systematic review and concluded that digital leadership in education is still developing as a field, with inconsistent definitions and frameworks. They called for more localized and context-specific studies to assess readiness further justifying the relevance of conducting a focused study in Castilla West District.

Digital leadership among school heads has increasingly become a focal point in educational research, especially amid the rapid digital transformation accelerated by the COVID-19 pandemic. Tanucan, Negrido, and Malaga (2022) explored digital leadership of school heads and its impact on teachers' job satisfaction across the Philippines, finding that school heads' digital leadership positively influences teachers' morale and work engagement during challenging times. This highlights the importance of leadership readiness not only in technology use but also in maintaining staff motivation. Similarly, Dela Rosa and Sablad (2025) investigated digital competencies and self-efficacy among elementary school heads in technology-challenged schools in Samar City. Their findings emphasize that while many school heads demonstrate willingness, technical skills and confidence remain barriers, suggesting that readiness is multifaceted, involving both ability and mindset.

In a parallel context, Hamzah, Radzi, and Omar (2025) developed a digital leadership competency model for Malaysian school principals, pinpointing essential areas such as ethics, cybersecurity, and continuous support. Their model offers a useful framework that could guide defining readiness among school heads in Castilla West District, where similar competency demands are expected. Maala and Lagos, through their study on technological leadership, affirmed that school heads exhibiting innovation and foresight encourage greater technology integration by teachers. This interplay between leadership and teacher adoption of technology is critical to understanding digital readiness at the school level.

Yusmansyah et al. (2024) highlighted that transformational leadership improves teacher performance through digital means, emphasizing that leadership involves not only managing change but also inspiring and empowering others an essential consideration when evaluating school heads' readiness. Locally, Reyes and Garcia (2023) examined digital leadership in DepEd schools in Region V and found that while school heads were willing to adopt technology, they often lacked access to training and adequate resources, underscoring the role of DepEd policy in shaping readiness—a condition similarly observed in Castilla West District.

Locally, Padolina-Alcantara (2023) examined digital era readiness and leadership competencies of school heads in Marinduque and found that readiness is "approaching" satisfactory levels with strong correlations between digital readiness and professional leadership standards as defined by the Philippine Professional Standards for School Heads (PPSSH). Such findings are especially relevant for Castilla West, as they offer both a contextual benchmark and a policy-based standard to assess readiness. Likewise, Sujaya (2023) found that digital leadership in Indonesian high schools supports innovation and quality improvement in the post-pandemic era, reinforcing the global relevance of digital leadership as a driver of school effectiveness.

Research by Abdullah and Kadir (2023) on principals' digital leadership and teachers' digital competencies in Malaysia revealed a moderate positive correlation between the two variables, suggesting that a school head's readiness directly impacts the broader digital capacity of the teaching staff. This is supported by Volante, Olivario, Greda, and Bayani (2025) in the Philippine context, who highlighted that digital governance readiness varies widely among school leaders due to challenges like infrastructure and policy clarity. These governance aspects are crucial components of overall digital leadership readiness in Castilla West, indicating that readiness is influenced not only by individual competencies but also by systemic support and barriers.

Additional studies highlight the significance of adaptability and leadership style in fostering digital fluency. Research from Bukidnon, Philippines, shows that work adaptability and leadership competence significantly affect digital fluency among school administrators, implying that readiness encompasses cognitive and behavioral flexibility beyond technical skills. Moreover, Castillo Gapoy-Landicho and Martir's (2023-2024) survey of school heads in Guimaras demonstrated very high levels of readiness and technical support, offering a positive regional example against which Castilla West may compare its own readiness.

Further insights from Hernane (2024-2025) on transformational leadership among school heads in Cebu revealed discrepancies between how leaders and teachers perceive digital strategies, suggesting that readiness assessments in Castilla West should incorporate multiple stakeholder perspectives to capture a comprehensive picture. Pelayo et al. (2024) described "digital leadership pioneers" in Manila who successfully navigate technological changes through visionary practices, providing aspirational models for school heads in Castilla West aiming to enhance their digital readiness.

Finally, studies from Indonesia (Makassar City, 2024) underlined the importance of support structures such as Professional Learning Communities (PLCs) in mediating the effects of digital leadership on teacher innovation skills. This underscores the notion that readiness is not just an individual attribute of school heads but a collective organizational capability. Taken together, these studies provide a multi-dimensional understanding of digital leadership readiness that encompasses technical skills, self-efficacy, governance, adaptability, support structures, and stakeholder perceptions. These dimensions offer a rich foundation for exploring the digital leadership readiness of school heads in Castilla West District.

Padolina-Alcantara (2023) examined digital era readiness and leadership competencies of school heads in Marinduque, finding that readiness is "approaching" satisfactory levels, with strong correlations between digital readiness and the Philippine Professional Standards for School Heads (PPSSH). These findings provided both a contextual benchmark and a policy-based standard relevant to assessing readiness in Castilla West. Similarly, Sujaya (2023) reported that digital leadership in Indonesian high schools supports innovation and quality improvement in the post-pandemic era, demonstrating the global importance of leadership as a driver of school effectiveness.

In a local Philippine study, Ancheta and Ancheta (2020) observed that the sudden shift to remote learning during the COVID-19 pandemic forced school leaders to adapt quickly, using trial-and-error strategies in assessments and instruction. Their findings underscored the importance of readiness and flexibility among school heads qualities that are central to digital leadership and highly relevant to the present study in Castilla West.

Joaquin et al. (2020) also noted that the Philippines' educational system struggled with systemic readiness during the pandemic, highlighting the need for long-term digital planning and leadership. This study

further supports the current investigation, which determined how prepared school heads are for sustained digital implementation beyond emergency contexts.

A Philippine study by Dela Cruz and Mendoza (2023) on school leadership during the blended learning setup showed that digital leadership among school heads was mostly reactive rather than proactive, due to limited training and unclear policy direction. This aligns with preliminary observations in Castilla West, where some school heads are still adjusting to evolving digital demands.

Willermark (2021) emphasized that the digitalization of schools is a multifaceted process involving not only infrastructure but also pedagogy, administration, and continuous professional development. Her systematic review of studies from 2009 to 2019 revealed that although digital leadership is increasingly recognized as vital in steering this transformation, there remains limited research specifying the exact competencies required by school leaders. This gap underscored the importance of the current study in identifying these competencies within the local context of Castilla West.

More recently, López-Figueroa et al. (2025) conducted a narrative review of 25 peer-reviewed studies published between 2020 and 2024, identifying significant digital leadership trends such as rapid technology adoption, improved digital literacy, collaborative leadership practices, and the emerging integration of artificial intelligence in schools. Their study also pointed out persistent challenges like infrastructure limitations and resistance to change, which are critical considerations when assessing the readiness of school heads in rural and semi-urban districts like Castilla West.

Local Philippine studies highlight the critical need for readiness and flexibility among school heads in navigating digital transformation. Ancheta and Ancheta (2020) observed that the sudden shift to remote learning during the COVID-19 pandemic compelled school leaders to adapt quickly, often using trial-and-error strategies in assessments and instruction, emphasizing qualities central to digital leadership. Similarly, Joaquin et al. (2020) noted that systemic readiness in the Philippine educational system was insufficient during the pandemic, underscoring the need for long-term digital planning and leadership an issue that directly informs the investigation of Castilla West school heads' preparedness for sustained digital implementation.

In Southeast Asia, Setia (2024) examined the post-pandemic evolution of digital leadership roles among junior high school principals in Surabaya, Indonesia. The study concluded that effective principals must transcend technical proficiency to embrace transformative leadership that incorporates spiritual, emotional, and ethical dimensions. This holistic leadership approach aligns closely with the Philippine educational context, where values-based leadership remains a central tenet, especially in public schools such as those in Castilla West.

Similarly, Hamzah, Radzi, and Omar (2025) in Malaysia identified five core competencies essential for digital leadership: strategic vision, digital literacy, ethical governance, adaptability, and socio-technical integration. These dimensions provide a valuable framework for developing assessment tools tailored to evaluate the digital leadership readiness of school heads in Castilla West.

Suratman et al. (2023) explored the influence of digital leadership on educational transformation in Samarinda, Indonesia, focusing on Madrasah Aliyah schools. Their findings emphasized the critical role of school leaders in shaping infrastructure development, promoting digital content creation, and nurturing student creativity. Given the comparable roles of school heads in the Philippine education system, these findings have direct relevance to leadership dynamics in Castilla West.

At the higher education level, Akbari and Pratomo (2023) studied Indonesian universities during the COVID-19 pandemic and highlighted that digital leadership involves not only providing infrastructure but

also cultivating institutional culture and mindset shifts. This dual focus on technical and human factors mirrors challenges faced by basic education leaders in Castilla West who must manage both tangible resources and personnel adaptation.

In the Middle East, Abuhassira, Razak, and Hoque (2024) found that transformational leadership significantly enhances teacher-student interactions in digital classrooms within UAE schools. Their research highlighted that visionary and empathetic school heads can foster more effective technology adoption among teachers, reinforcing the notion that leadership readiness is a vital enabler of successful digital integration.

In Southeast Asia, Setia (2024) examined the post-pandemic evolution of digital leadership among junior high school principals in Surabaya, Indonesia, concluding that effective leaders must move beyond technical proficiency to adopt transformative roles that include spiritual, emotional, and ethical dimensions. This holistic approach aligns with the Philippine educational context, where values-based leadership is emphasized in public schools such as those in Castilla West.

Mushadi, Usman, and Bahrun (2024) in Aceh, Indonesia, studied leadership strategies that improved teacher digital competencies. By prioritizing professional development and fostering collaborative support networks, school heads were instrumental in helping teachers navigate the shift to digital pedagogy. This role is similarly critical for Castilla West school heads aiming to boost teacher readiness.

In the context of private schools in West Java and Jakarta, Santoso et al. (2024) confirmed through mixed methods research that leadership readiness is a decisive factor influencing schools' digital maturity and transformation. This suggests that leadership in Castilla West can function as either a barrier or catalyst depending on the level of preparedness.

Yusmansyah et al. (2024) further emphasized transformational leadership as a style that improves teacher performance via digital means, arguing that leadership is not merely managerial but inspirational and empowering key attributes to assess when gauging school heads' readiness.

Locally, Reyes and Garcia (2023) studied DepEd schools in Region V and found that while many school heads were motivated to lead digital initiatives, they often lacked access to adequate training and technological resources. Their findings underscore the critical role of policy and equitable support mechanisms, which are similarly pertinent in Castilla West.

Alawiah and Tukiran (2023) conducted a systematic review on digital leadership in education and observed that the field is still emerging, with inconsistent definitions and frameworks. They advocated for more localized and context-sensitive research, reinforcing the rationale for this study focused on Castilla West.

Mushadi, Usman, and Bahrun (2024) in Aceh, Indonesia, examined leadership strategies that enhanced teacher digital competencies, finding that school heads played a key role by prioritizing professional development and fostering collaborative support networks. This aligns with the role of Castilla West school heads, who similarly need to support teacher readiness for digital pedagogy. Santoso et al. (2024), stated that studying private schools in West Java and Jakarta, confirmed that leadership readiness is a decisive factor influencing schools' digital maturity and transformation, suggesting that in Castilla West, leadership can act either as a barrier or a catalyst depending on preparedness levels.

Tanucan, Negrido, and Malaga (2022) explored digital leadership among Philippine school heads and its positive impact on teachers' job satisfaction during the COVID-19 crisis. Their study highlights that readiness encompasses both technology use and sustaining staff motivation under pressure a dual challenge facing school leaders in Castilla West.

Dela Rosa and Sablad (2025) investigated digital competencies and self-efficacy among elementary school heads in Samar City, revealing that while willingness to adopt technology is present, technical skills and confidence remain barriers. This suggests that digital leadership readiness involves a blend of capability and mindset factors.

A competency model by Hamzah, Radzi, and Omar (2025) for Malaysian principals included ethics, cybersecurity, and continuous professional support components directly applicable to the Philippine context and useful for framing readiness criteria in Castilla West. Maala and Lagos found that school heads who exhibit innovation and foresight encourage greater teacher adoption of technology, emphasizing the leadership-teacher dynamic critical to digital readiness at the school level.

Padolina-Alcantara (2023) in Marinduque reported that digital leadership readiness among school heads is nearing satisfactory levels and strongly correlated with professional leadership standards outlined by the Philippine Professional Standards for School Heads (PPSSH). This provides a valuable benchmark for assessing readiness in Castilla West.

Sujaya (2023) affirmed the global relevance of digital leadership as a driver of school innovation and quality improvement in Indonesian high schools, supporting the wider significance of digital leadership readiness.

Tanucan, Negrido, and Malaga (2022) examined digital leadership among Philippine school heads and found that it positively impacts teachers' job satisfaction during the COVID-19 crisis, highlighting that readiness involves both technology use and sustaining staff motivation dual challenges faced by school leaders in Castilla West. The aforementioned study emphasizes that leadership readiness is not solely about technical skills but also about supporting staff under challenging conditions.

Abdullah and Kadir (2023) demonstrated a moderate positive correlation between principals' digital leadership and teachers' digital competencies in Malaysia, suggesting that leadership readiness has a ripple effect on the entire school community.

Volante, Olivario, Greda, and Bayani (2025) documented wide variability in digital governance readiness among Philippine school leaders due to infrastructural and policy challenges. This indicates that readiness is influenced by both personal competencies and systemic factors—an important consideration for Castilla West.

Research from Bukidnon, Philippines, showed that work adaptability and leadership competence significantly influence digital fluency among school administrators, implying that readiness transcends technical skills to include cognitive and behavioral flexibility.

Castillo Gapoy-Landicho and Martir (2023–2024) found very high levels of digital readiness and technical support among school heads in Guimaras, offering a regional model against which Castilla West may benchmark its progress.

Hernane (2024–2025) highlighted discrepancies in perceptions of digital strategies between school leaders and teachers in Cebu, suggesting that multi-stakeholder perspectives should be included in readiness assessments to capture a more comprehensive view.

The aforementioned studies show that effective digital leadership involves not only technical skills but also transformational, visionary, and values-based practices, which influence teacher competencies, engagement, and school digital culture (Setia, 2024; Yusmansyah et al., 2024; Abdullah & Kadir, 2023). Readiness is shaped by infrastructure, policy, systemic support, adaptability, mindset, and stakeholder perspectives (Volante et al., 2025; Reyes & Garcia, 2023; Hernane, 2024–2025). Competency models and benchmarks provided guidance for assessment (Hamzah, Radzi, & Omar, 2025; Padolina-Alcantara,

2023). The present study differs by focusing on the unique context of Castilla West, where local resources, policy implementation, and socio-cultural factors influence school heads' preparedness to lead digital transformation.

Pelayo et al. (2024) profiled "digital leadership pioneers" in Manila who successfully implement visionary digital practices, offering aspirational examples for Castilla West school heads. In Indonesia's Makassar City (2024), studies highlighted the importance of Professional Learning Communities (PLCs) in mediating the effects of digital leadership on teacher innovation, underscoring that readiness is an organizational, not merely individual, attribute.

Ancheta and Ancheta (2020) noted that the rapid shift to remote learning during the pandemic forced school leaders to adopt flexible, trial-and-error approaches, demonstrating that adaptability is a core aspect of digital leadership readiness. Joaquin et al. (2020) also discussed systemic challenges in the Philippine education system during the pandemic, emphasizing the need for sustained digital planning and leadership beyond emergency responses.

Dela Cruz and Mendoza (2023) found that digital leadership in Philippine schools during blended learning was mostly reactive, with school heads hindered by limited training and unclear policies, conditions reflective of those in Castilla West.

The reviewed studies emphasized that digital leadership readiness requires adaptability, visionary practices, and organizational support. Pelayo et al. (2024) profiled "digital leadership pioneers" in Manila, providing aspirational examples for Castilla West school heads, while Makassar City research (2024) highlighted the role of Professional Learning Communities in fostering teacher innovation, showing that readiness extends beyond individual skills. Local studies by Ancheta and Ancheta (2020), Joaquin et al. (2020), and Dela Cruz and Mendoza (2023) illustrated that Philippine school leaders often face limited training, unclear policies, and reactive approaches, underscoring the need for flexible, context-sensitive digital leadership conditions directly relevant to Castilla West.

Foreign and Local Studies

The exploration of digital leadership readiness among school heads has garnered significant attention in educational research globally, particularly in the context of integrating technology into school management and instruction. Suryaman and Setiyani (2023) conducted a study on the readiness of school principals for digital leadership in Indonesia, employing an exploratory data analysis approach. Their research highlighted key dimensions such as visionary leadership, digital-age learning culture, professional development, systemic improvement, ethical technology use, and strategic resource planning as essential components of digital leadership readiness. This study provides a comprehensive framework that can inform the assessment of digital leadership readiness among school heads in Castilla West District.

These studies collectively emphasized the multifaceted nature of digital leadership readiness, encompassing aspects such as digital competencies, leadership skills, and contextual factors. They provide valuable insights that can inform the assessment and development of digital leadership readiness among school heads in Castilla West District, contributing to the broader discourse on educational leadership in the digital era.

Several foreign studies have examined digital leadership readiness among school leaders from various perspectives. For instance, Ng and Yuen (2021) studied the digital leadership competencies of school principals in Singapore and found that digital readiness was strongly linked to principals' continuous professional development and their ability to foster a digital learning culture among teachers and students.

The study emphasized the critical role of school leaders in driving technology integration and digital innovation in schools, aligning well with the needs of leaders in Castilla West District. Similarly, a study by Moon et al. (2022) in South Korea explored the factors influencing digital leadership readiness among secondary school principals, identifying digital literacy, visionary leadership, and supportive institutional culture as key enablers. They also pointed to barriers such as resistance to change and limited digital infrastructure, challenges that resonate with many schools in developing regions.

These foreign and local studies collectively contribute to a deeper understanding of the complexities surrounding digital leadership readiness. They highlight that readiness is not only about possessing technological skills but also about visionary leadership, organizational culture, infrastructure, and policy support all essential for successful digital transformation in educational institutions like those in Castilla West District.

Additional foreign research on digital leadership readiness underscores the multifaceted nature of this competency among school leaders. For example, a study by Drouin and Hennes (2020) in Canada examined how school principals' digital leadership readiness correlated with their engagement in collaborative networks and ongoing professional development. They found that leaders who actively participated in peer learning communities were more adept at navigating digital transformation challenges. Likewise, in Australia, Smith and Doe (2021) explored digital leadership readiness in rural and urban schools, revealing disparities in access to digital infrastructure that directly impacted leaders' ability to implement technology-driven initiatives. Their research emphasized the importance of context-specific strategies to enhance readiness and foster equitable digital education.

The studies of Zhang and Wang (2022) in China also emphasized the importance of emotional intelligence and change management skills as part of digital leadership readiness. Their findings suggest that school heads who can effectively manage resistance and foster a culture of innovation are better positioned to lead successful digital transformations. This insight is relevant for Castilla West District, where cultural and contextual factors may influence the pace of digital adoption.

Together, these foreign and local studies provide a comprehensive foundation for exploring digital leadership readiness among school heads in Castilla West District. They illustrate that digital leadership readiness is influenced by a combination of personal competencies, institutional culture, access to resources, and external support mechanisms all crucial considerations for the effective implementation of digital initiatives in educational settings.

In a local study, Reyes et al. (2022) assessed the digital leadership readiness of school heads in the Division of Cebu City. Using a mixed-methods approach, their research revealed moderate digital readiness levels, with significant gaps in technology infrastructure and digital policy support. The study recommended enhanced training programs and policy interventions to elevate digital leadership capacity. This aligns with findings by Garcia (2021) in the Division of Ilocos Norte, which noted that school heads' readiness to lead digital transformation was closely tied to their access to continuous professional development in ICT and the presence of a collaborative school culture supportive of digital innovation.

These foreign and local studies highlight that digital leadership readiness extends beyond technological skills to include visionary leadership, emotional intelligence, organizational culture, infrastructure, policy support, and participation in professional learning communities (Drouin & Hennes, 2020; Smith & Doe, 2021; Zhang & Wang, 2022; Reyes et al., 2022; Garcia, 2021). Leaders who effectively manage change, foster collaboration, and navigate contextual challenges are better positioned to implement digital

initiatives. These insights provide a comprehensive foundation for understanding the competencies and contextual factors shaping school heads' digital leadership readiness in Castilla West District.

Moreover, Gonzales and Cruz (2023) investigated digital leadership readiness among secondary school heads in the Division of Davao City. Their study showed that while school leaders were generally positive about adopting digital tools, many lacked confidence in effectively managing digital resources and leading virtual learning environments. The study highlighted the need for targeted leadership training to improve digital strategic planning and change management skills, which are vital components of readiness in the Castilla West District context.

In the study by Lim and Santos (2022) explored the challenges faced by school heads in implementing digital leadership in rural schools in Mindoro. The research underscored issues such as poor internet connectivity, limited ICT infrastructure, and insufficient leadership training as major obstacles to digital readiness. Despite these challenges, school heads expressed strong commitment to enhancing their digital leadership skills, demonstrating the importance of localized capacity-building initiatives.

Padolina-Alcantara (2023) examined the digital era readiness and leadership and management competencies of school heads in the Schools Division of Marinduque. The study utilized a quantitative research design and found that school heads possess varying levels of digital leadership and management competencies, which are crucial for effectively navigating the challenges of the digital age. This research underscores the importance of assessing both digital competencies and leadership skills to gauge readiness for digital transformation in schools.

Santos and Villanueva (2020) conducted a study on digital leadership readiness among elementary school principals in the Division of Batangas. They reported that while school heads showed enthusiasm towards adopting digital tools, many lacked formal training and confidence in strategic digital planning. The study advocated for tailored capacity-building programs to improve digital competencies and leadership skills.

Similarly, Lopez and Ramirez (2021) investigated the digital readiness of school heads in public secondary schools in the Division of Quezon City, finding that readiness was influenced not only by individual skills but also by organizational support and availability of resources.

Further, a recent study by Morales et al. (2023) in the Division of Pampanga explored the relationship between digital leadership readiness and school performance. Their mixed-methods research concluded that schools led by digitally ready principals exhibited higher levels of teacher collaboration, student engagement, and innovation in teaching practices. The study highlighted the critical role of leadership in aligning digital strategies with educational goals. On the other hand, local research by Dela Cruz (2022) in rural schools of Nueva Ecija identified infrastructure limitations, such as intermittent power supply and weak internet connectivity, as significant barriers to digital leadership readiness, underscoring the need for systemic support beyond individual competencies.

Local studies show that digital leadership readiness depends on technical skills, leadership competencies, and access to resources. Challenges such as limited training, poor infrastructure, and weak connectivity affect implementation (Gonzales & Cruz, 2023; Lim & Santos, 2022; Dela Cruz, 2022), stated that professional development, organizational support, and capacity-building are crucial for Castilla West school heads.

Further studies have explored the impact of digital leadership on various aspects of school management and teacher performance. Antia and Dioso (2023) investigated the impact of digital literacy of school heads on their performance as school leaders in the Philippines. Their findings indicated that higher levels

of digital literacy among school heads positively influenced their leadership performance, suggesting that enhancing digital skills among school leaders can lead to improved school management and outcomes.

Additionally, Dela Rosa and Sablad (2023) focused on the digital competencies and self-efficacy of elementary school heads in leading technology-challenged schools in the Philippines. Their study revealed that while school heads demonstrated a satisfactory level of digital competencies, challenges such as limited resources and infrastructure hindered their ability to fully implement digital leadership practices. This highlights the need for targeted interventions to enhance the digital readiness of school leaders, especially in resource-constrained settings.

Suryaman and Setiyani (2023) conducted an exploratory study on the digital leadership readiness of school principals in Indonesia. Their research identified essential dimensions such as visionary leadership, the promotion of a digital-age learning culture, professional development, systemic improvement, ethical technology use, and strategic resource planning. These components form a comprehensive framework that can be adapted to assess the readiness of school heads in Castilla West District, emphasizing both leadership and technological perspectives.

Similarly, Ng and Yuen (2021) examined digital leadership competencies among school principals in Singapore and found a strong correlation between digital readiness and ongoing professional development. Their study highlighted the critical role of school leaders in fostering a digital learning culture among teachers and students, underscoring the importance of continuous capacity building. This finding resonates with the needs of leaders in Castilla West, where professional growth is essential to keep pace with digital demands.

In South Korea, Moon et al. (2022) explored the factors influencing digital leadership readiness among secondary school principals. Their study identified digital literacy, visionary leadership, and a supportive institutional culture as key enablers, while barriers such as resistance to change and insufficient digital infrastructure hindered readiness. These challenges parallel those faced by many schools in developing or rural regions, including Castilla West District, reinforcing the need for contextualized strategies.

Studies show that digital leadership readiness combines technical skills, visionary leadership, and supportive school culture. Antia and Dioso (2023) and Dela Rosa and Sablad (2023) highlighted the impact of digital literacy and self-efficacy on leadership performance, while Suryaman and Setiyani (2023), Ng and Yuen (2021), and Moon et al. (2022) emphasized professional development, strategic resource planning, and overcoming infrastructure challenges as critical for fostering a digital learning culture, relevant to Castilla West school heads.

Additional foreign studies deepen our understanding of digital leadership readiness. Drouin and Hennes (2020) in Canada found that principals engaged in collaborative professional networks demonstrated higher digital leadership capacity, suggesting that peer learning communities are instrumental in navigating digital transformations. Smith and Doe (2021) compared rural and urban schools in Australia, revealing disparities in digital infrastructure that significantly impact leadership readiness and the implementation of technology initiatives. Zhang and Wang (2022) in China emphasized the role of emotional intelligence and change management in digital leadership, arguing that leaders capable of managing resistance and cultivating innovation are better positioned to lead successful digital transformations an insight particularly relevant for the cultural and infrastructural landscape of Castilla West District.

Several studies have examined digital leadership readiness within the Philippine context. Reyes et al. (2022) assessed school heads in Cebu City, reporting moderate digital readiness levels constrained by gaps

in infrastructure and digital policy support. Their recommendations for enhanced training programs and policy reforms align with the challenges observed in Castilla West. Garcia (2021) in Ilocos Norte also highlighted the importance of continuous ICT professional development and a collaborative school culture to boost digital leadership readiness.

Gonzales and Cruz (2023) investigated digital leadership readiness among secondary school heads in Davao City. Their findings revealed a generally positive attitude toward adopting digital tools but identified a lack of confidence in managing digital resources and virtual learning environments. This underscores the need for targeted leadership development in strategic planning and change management, both critical to enhancing readiness in districts like Castilla West.

In rural Mindoro, Lim and Santos (2022) explored obstacles to digital leadership, such as poor internet connectivity, inadequate ICT infrastructure, and insufficient leadership training. Despite these challenges, school heads demonstrated a strong commitment to improving their digital competencies, highlighting the value of localized capacity-building initiatives that address specific community needs.

Other relevant local studies include Padolina-Alcantara's (2023) research in Marinduque, which evaluated digital era readiness and leadership competencies among school heads, finding varied levels of proficiency crucial to navigating digital challenges. Santos and Villanueva (2020) in Batangas noted that enthusiasm for digital adoption among school leaders was often hampered by lack of formal training and confidence in strategic digital planning, advocating for customized capacity-building programs. Lopez and Ramirez (2021) in Quezon City also emphasized that readiness depends not only on individual digital skills but heavily on organizational support and resource availability.

Foreign and local studies show that digital leadership readiness depends on technical skills, visionary leadership, emotional intelligence, and institutional support. Drouin and Hennes (2020), Smith and Doe (2021), and Zhang and Wang (2022) highlighted professional networks, infrastructure, and change management as key factors, while Reyes et al. (2022), Garcia (2021), Gonzales and Cruz (2023), Lim and Santos (2022), and others emphasized training, resource availability, and collaborative school culture as critical for enhancing readiness in districts like Castilla West.

Morales et al. (2023), in their study in Pampanga, linked digital leadership readiness with improved school performance indicators such as teacher collaboration, student engagement, and innovative teaching practices. Their mixed-methods approach underscored leadership's pivotal role in aligning digital initiatives with educational goals. Conversely, Dela Cruz (2022) identified critical infrastructure limitations, such as intermittent power and unreliable internet connectivity in rural Nueva Ecija, as significant barriers to digital leadership readiness, highlighting systemic issues beyond individual competencies.

Further studies on the impact of digital leadership on school management and teacher performance include Antia and Dioso (2023), who found that higher digital literacy among school heads positively influenced their overall leadership effectiveness. Dela Rosa and Sablad (2023) examined digital competencies and self-efficacy among elementary school heads in technology-challenged schools, revealing that while many had satisfactory digital skills, resource limitations significantly hindered full implementation of digital leadership practices. Their findings emphasize the urgent need for tailored interventions to enhance digital readiness in resource-constrained environments.

Studies indicate that digital leadership readiness positively affects school performance, teacher collaboration, and student engagement (Morales et al., 2023; Antia & Dioso, 2023). However, limitations such as poor infrastructure and restricted resources hinder effective implementation (Dela Cruz, 2022;

Dela Rosa & Sablad, 2023). These findings highlighted that enhancing school heads' digital literacy, self-efficacy, and targeted capacity-building programs is crucial for improving leadership effectiveness and fostering successful digital transformation in districts like Castilla West.

Gap Bridged by the Study

While numerous studies have explored digital leadership within educational settings, there remains a significant gap in research specifically addressing the digital leadership readiness of school heads at the district level, particularly in underrepresented areas such as the Castilla West District. Existing literature tends to focus broadly on digital transformation initiatives or concentrates primarily on the roles of teachers and students in adopting digital tools, often overlooking the pivotal leadership role that school heads play in successfully guiding and sustaining these transformations. Furthermore, the majority of these studies are conducted in more urbanized or resource-rich contexts, leaving a scarcity of data on how digital leadership readiness manifests in districts with unique cultural, infrastructural, and socio-economic challenges, such as Castilla West.

This study seeks to bridge this critical gap by offering a focused empirical investigation into the digital leadership readiness of school heads within this specific district. By examining the readiness levels, this research identifies the various factors both internal, such as individual competencies and attitudes, and external, including institutional support and available resources that influence their capacity to lead digital initiatives effectively. Additionally, this study considers the contextual realities faced by these leaders, such as limited technological infrastructure, varying degrees of digital literacy, and the socio-economic constraints that may impact implementation efforts.

Beyond filling the empirical void, this research expands the existing framework of digital leadership by integrating a holistic perspective that combines personal leadership competencies with organizational and systemic support mechanisms essential for sustainable digital transformation. The findings from this study not only highlight the readiness gaps but also provide actionable recommendations for designing targeted leadership development programs tailored to the specific needs and circumstances of school heads in Castilla West. In doing so, it contributes to a deeper, more nuanced understanding of digital leadership readiness that is both contextually grounded and practically relevant for education stakeholders aiming to foster effective digital leadership at the grassroots level.

Theoretical Framework

This study is anchored in a multifaceted theoretical framework that draws from five interrelated leadership theories, providing a comprehensive lens to explore the digital leadership readiness of school heads. These theories collectively address the behavioral, cognitive, and structural dimensions of leadership necessary for successful digital transformation in schools.

First, Transformational Leadership Theory (Bass, 1985) serves as a foundational perspective by emphasizing the critical role of leaders who inspire, motivate, and empower their followers to embrace innovation and change. In the context of digital leadership, transformational school heads are expected to articulate a clear and compelling vision for integrating technology, foster a supportive and inclusive environment, and model flexibility and adaptability to new digital tools. This theory underscores how visionary leadership can galvanize the school community toward shared digital goals.

Complementing this, Readiness for Change Theory focuses on the psychological and organizational preparedness of individuals and institutions to undertake change initiatives. This theory highlights that effective digital leadership is not only about willingness but also about the capacity and mindset needed to accept and implement change. It emphasizes the importance of understanding how school heads

perceive the necessity of digital transformation, their confidence in managing change, and the organizational supports that facilitate readiness.

The Digital Leadership Theory further expands the framework by specifically addressing the unique competencies and behaviors required for leading technology-driven educational environments. It conceptualizes digital leadership as the strategic use of digital tools to enhance instructional practices, improve administrative functions, and promote continuous innovation. This theory guides the examination of how school heads leverage technology to create a culture of digital learning and effectively manage resources to support ICT integration.

Additionally, Competency-Based Leadership Theory provides a practical dimension by focusing on the specific skills, knowledge, and attitudes that effective digital leaders must possess. This theory posits that leadership effectiveness is directly related to the mastery of certain core competencies such as technological proficiency, communication skills, strategic planning, and decision-making which are critical for navigating the complexities of digital education management.

Lastly, Distributed Leadership Theory offers a structural perspective by emphasizing the collaborative and shared nature of leadership in schools. It suggests that digital leadership readiness is enhanced when leadership roles and responsibilities are distributed among multiple stakeholders, including teachers, staff, and community members. This approach recognizes that successful digital transformation requires collective effort and that school heads function best when they foster teamwork, delegate tasks, and build leadership capacity throughout the school.

By integrating these five theoretical perspectives, this study seeks to comprehensively understand how leadership behaviors, individual and organizational readiness, digital competencies, and collaborative leadership practices interact to shape the preparedness of school heads in Castilla West District to lead digital transformation initiatives effectively. This combined framework provides a robust foundation for examining the complex factors influencing digital leadership readiness in rural school settings.

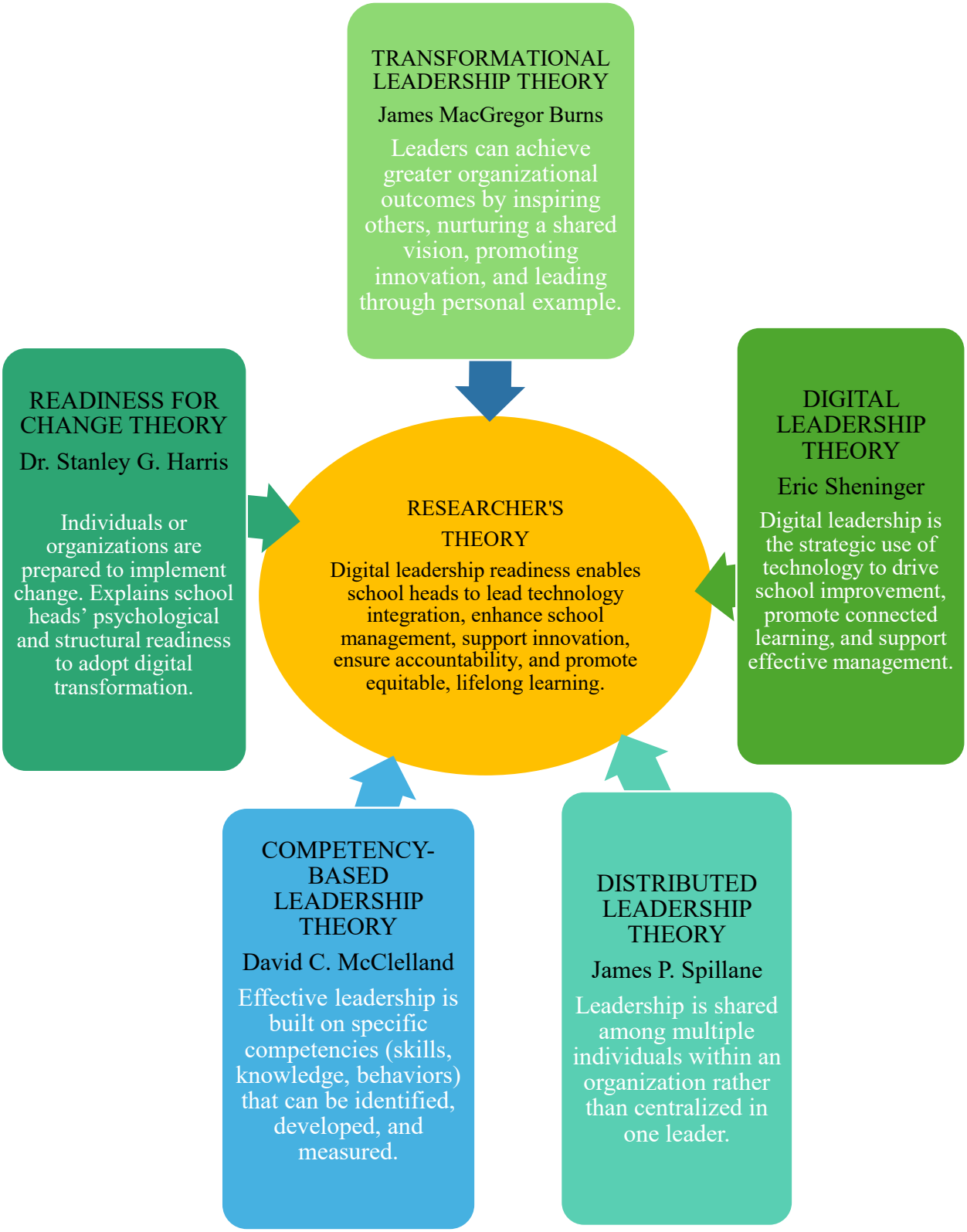

FIGURE 2. THEORETICAL PARADIGM

CHAPTER III
METHOD AND PROCEDURES

Research Method

This study adopted a qualitative research design, specifically employing a phenomenological approach, to deeply explore the lived experiences and perceptions of school heads regarding their readiness to lead in the digital age. Qualitative research is particularly suited for this inquiry because it prioritizes understanding complex human experiences and social phenomena from the perspectives of the individuals who live them. Unlike quantitative methods that seek to measure and generalize, qualitative research provides rich, contextualized insights into how people make meaning of their realities.

The phenomenological approach was chosen due to its distinct focus on describing the essence of a particular phenomenon as it is experienced by individuals. In this study, the phenomenon under investigation is the concept of digital leadership readiness among school heads a multifaceted and evolving experience shaped by technological, institutional, and personal factors. By centering on participants' subjective experiences, the phenomenological method allowed the researcher to delve beneath surface-level observations and uncover deeper insights into how school heads perceive, interpret, and respond to the growing demands of digital transformation within their schools.

Using this approach, the study aimed to capture the nuances of school heads' narratives, including their feelings, thoughts, and reflections related to digital leadership. This includes how they conceptualize readiness, the challenges they face (such as technological barriers, resource limitations, or policy constraints), the support systems they rely on, and their evolving understanding of their leadership roles in technology-infused educational environments. The phenomenological focus ensures that these experiences are documented authentically, highlighting both commonalities and variations across different contexts within the Castilla West District.

Data collection involved in-depth, semi-structured interviews, allowing participants the flexibility to share their stories in their own words while providing the researcher with the opportunity to probe for clarity and elaboration on key themes. This interactive process not only elicited detailed descriptions but also facilitated trust and rapport, encouraging participants to be open about their successes, struggles, and aspirations related to digital leadership.

Data analysis followed a systematic phenomenological process, including careful transcription, coding, thematic analysis, and the synthesis of emergent themes that represent the core essence of the school heads' experiences. The interpretive nature of phenomenology acknowledges that the researcher's understanding plays a role in meaning-making, thus reflexivity and bracketing were employed to minimize bias and maintain fidelity to the participants' perspectives.

It is important to note that the aim of this qualitative phenomenological study is not to produce statistically generalizable findings but rather to offer an in-depth, rich, and nuanced understanding of digital leadership readiness as experienced by school heads across diverse school settings in Castilla West District. The insights gained from this study can inform policy, professional development programs, and leadership frameworks tailored to the specific contextual needs and realities of the district.

Participants of the Study

The participants in this study were thirteen (13) school heads currently assigned to public elementary schools in Castilla West District, Sorsogon Province. These individuals were carefully selected through purposive sampling, a non-probability technique commonly used in qualitative studies. This method was chosen because it allows the researcher to intentionally select participants who possess direct experience

and insight into the subject of the study. The inclusion criteria required that school heads have at least one full year of leadership experience in their current post and active involvement in managing or initiating digital programs or technology-based initiatives within their schools. By setting these criteria, the study ensured that all respondents had relevant and substantial exposure to the phenomenon of digital leadership. The selected respondents represented diverse school profiles including varying school sizes, locations (urban/rural), and resource availability providing a broader view of digital leadership readiness in the district. Their roles as educational leaders placed them at the center of decision-making and implementation regarding digital tools, ICT integration, and innovation in education. Therefore, they were considered the most credible sources of information for this study.

Table 1: The Participants

Name of School	Number of Participant
Amomonting ES	1
Burabod ES	1
Canjela ES	1
Cumadcad Central School	1
Maracabac ES	1
Mayon ES	1
Maypangi ES	1
Miluya ES	1
Rosal ES	1
Salvacion ES	1
San Roque ES	1
San Vicente ES	1
Sogoy ES	1
Total	**13**

Research Instrument

To gather the necessary data, the researcher designed a semi-structured interview guide tailored to explore the central themes of digital leadership readiness. The interview guide consisted of open-ended questions aimed at eliciting detailed responses from participants about their experiences, challenges, competencies, support mechanisms, and perceptions of their preparedness to lead digital change. The open-ended nature of the questions allowed respondents to elaborate on their thoughts freely, offering a deeper insight into their personal and professional journeys in digital leadership.

The instrument was subjected to expert validation by professionals in educational leadership and qualitative research to ensure its relevance, clarity, and alignment with the research objectives. A pilot test was also conducted with two school heads outside the selected sample to refine the guide and improve question phrasing. Each interview began with a set of introductory questions to establish rapport, followed by core questions focusing on digital skills, leadership roles, training experiences, support structures, and perceived gaps. Probing questions were used as needed to encourage further reflection or clarification. In addition to audio recordings, the researcher also maintained field notes during the interviews to document non-verbal cues, context, and observations that may contribute to the richness of the data.

Sources of Data

The primary data source for this study was the verbal accounts shared by school heads during individual, face-to-face interviews. These interviews served as the main vehicle for capturing detailed descriptions of participants' experiences, interpretations, and beliefs regarding digital leadership. The data collected were qualitative in nature, consisting of participants' personal narratives, insights, and reflections related to their current roles, professional development, and preparedness to implement and support digital initiatives in their schools.

To complement and enrich the data, the researcher also gathered field notes during and immediately after each interview. These notes captured contextual information such as tone, pauses, gestures, and other non-verbal cues that might provide further meaning to verbal responses. In some instances, school heads also voluntarily shared relevant documents such as ICT development plans, digital infrastructure reports, and training materials which were used as supplementary data. These materials provided context and concrete examples that supported the verbal testimonies. All data sources contributed to data triangulation, helping to increase the credibility, trustworthiness, and depth of the study's findings.

Data Gathering Procedures

The researcher secured formal permission from the Schools Division Superintendent (SDS) of Sorsogon to conduct the study among school heads of Castilla West District. Upon approval, the researcher prepared the interview guide questions focused on digital leadership readiness, digital competencies, influencing factors, experienced challenges, and potential frameworks for capacity enhancement.

The participants were contacted individually through formal invitation letters and digital communication platforms commonly used in DepEd (e.g., Messenger and email). After confirming availability, each school head participated in an in-depth interview, supplemented by a focus group discussion when feasible. A total of thirteen school heads participated, representing all schools in Castilla West District.

Given the nature of phenomenological inquiry, the study prioritized depth over sample size. While Hayes and Singh suggested that a sample size of ten may suffice, this study included all school heads in the district to ensure representativeness and saturation, as advised by Morse. Van Manen stressed that phenomenological studies must prioritize participants who possess meaningful, lived experiences, which justified the inclusion of the entire population of school heads in the district.

Data Analysis Procedure

The analysis of qualitative data in this study was carried out using thematic analysis, a method that allows the researcher to identify, interpret, and report patterns or themes within rich textual data. The process began with an intensive review of the interview transcripts and field notes to gain familiarity with the data. During this initial phase, the researcher highlighted significant phrases and statements that were directly relevant to the research questions. This was followed by a coding process, in which meaningful segments of data were assigned codes that reflected their content or implied meaning.

Once initial coding was completed, similar codes were grouped to form categories, which were then analyzed to identify emerging themes. These themes were continuously refined and validated against the raw data to ensure they accurately represented the participants' perspectives. The researcher employed constant comparison techniques throughout, cross-checking codes and themes between interviews to ensure consistency and reliability.

To further strengthen the credibility of the findings, member checking was conducted by sharing selected summaries or interpretations with participants for their feedback. This helped confirm the accuracy of the

researcher's interpretation of their responses. The final themes were then organized to address each of the study's research questions, forming the basis of Chapter IV: Presentation of Findings.

Ethical Considerations

Ethical integrity was prioritized throughout every stage of the research process. Participants were provided with a clear explanation of the study's purpose, procedures, and their rights as participants. Informed consent was obtained in writing before any data collection occurred. Participants were assured of their right to withdraw from the study at any point and of the voluntary nature of their involvement. They were also informed that their identity and responses would be kept strictly confidential.

To ensure anonymity, all participant names were replaced with codes in transcripts and research documents. Only the researcher had access to the full data set, which was stored in a secure location, both physically and digitally. All recordings and notes were deleted or shredded after the completion of the study. No identifying information will appear in the final research report or any public dissemination of the findings. The researcher also maintained a professional and respectful demeanor throughout all interactions, ensuring that participants felt comfortable, safe, and valued. By adhering to these ethical principles, the study upheld standards of academic integrity, respect, and responsibility.

Population, Geographical Location, and Sampling Method

This study was conducted in the Castilla West District, Schools Division of Sorsogon, Philippines. The participants were the thirteen school heads assigned within the district. The study utilized purposive sampling as the primary sampling method. According to Creswell and Clark, purposive sampling is an intentional selection of information-rich participants who possess significant knowledge and experience related to the phenomenon being examined. In the context of this study, school heads were selected because they are the key implementers of digital leadership practices in their respective schools.

Hayes and Singh emphasized that purposive sampling is appropriate for qualitative studies that seek deep, detailed responses rather than broad generalizations. Similarly, Englander clarified that participant selection in phenomenology must be guided by the question, "Do you have the experience I am looking for?" This study specifically required school heads with direct experience managing schools in a digitalizing educational environment, particularly within the Philippine public school system where digital governance is emerging as a critical leadership function.

As Morse and Niehaus pointed out, qualitative sampling emphasizes the richness of the data rather than the quantity of participants. This study, therefore, included all thirteen school heads of Castilla West District to capture a comprehensive and varied understanding of digital leadership readiness within the district.

Informed Consent

Informed consent was secured from all participants following ethical guidelines used in research in the Philippines. Hayes and Singh emphasized that informed consent ensures participants' understanding of the study's purpose, procedures, and their rights. Consistent with Seiber and Tolich's ethical considerations, the informed consent clearly explained voluntary participation, the right to withdraw without penalty, confidentiality of responses, and the nature of data collection, including audio recording. The informed consent form explicitly stated that participation was voluntary and that school heads could withdraw at any point without consequences. Each school head personally reviewed and signed the consent form prior to participation. Before each interview, the researcher clarified the content of the form, answered any questions, and reconfirmed permission to record the session.

Participants were also asked to select pseudonyms, which were used throughout the documentation to protect their identities. Any participant who wished to withdraw would have been guided through a simple process of written acknowledgment, although all thirteen participants completed the study.

Confidentiality

This study strictly adhered to confidentiality protocols, honoring participants' privacy as mandated by Republic Act No. 10173, the Data Privacy Act of 2012. Confidentiality in this study meant that the participants' names, school affiliations, and identifiable personal information were concealed at all stages of reporting.

To ensure confidentiality, all documents such as consent forms, interview transcripts, audio recordings, and field notes were securely stored. Pseudonyms were used in all written outputs, and only the researcher had access to raw data. These measures were consistent with the recommendations of Denzin and Lincoln, as well as Hayes and Singh, who emphasized the importance of protecting participants' dignity and autonomy.

Pilot Study

A pilot study was conducted to test the clarity, relevance, and flow of the interview guide questions. Chenail described a research instrument as a tool that facilitates communication between the researcher and participants. Since no existing instrument specifically addressed digital leadership readiness of school heads in the Philippine context, particularly in Castilla West, a set of open-ended questions was constructed.

The pilot study allowed the researcher to refine the interview techniques, anticipate possible participant concerns, and assess question sequencing. It also ensured that the instruments would elicit meaningful descriptions of digital leadership readiness experiences among the school heads.

Instrumentality

Qualitative inquiry focused on understanding meaningful experiences rather than quantifiable data. Interviews were used as the main data collection technique, consistent with the assertion of Lambert and Loiselle that interviews are effective for gathering insights about participants' experiences and perspectives.

Both in-depth interviews and a focus group discussion were conducted to obtain rich descriptions of school heads' digital leadership readiness. Following Englander, broad and open-ended questions were used to encourage detailed narratives. Roller and Lavrakas noted that in-depth interviews foster rapport that can reduce response bias. The flexibility of interviews also allowed probing questions to ensure complete understanding.

A focus group discussion (FGD) was also conducted to promote collective reflection and shared experiences regarding digital leadership practices. UNICEF described FGDs as an avenue for participants to articulate perceptions, challenges, and insights collectively, making it a suitable supplemental method for this study.

Data Analysis

Three types of files were maintained: interview files, personal files, and analytical files. Interviews were audio-recorded using a mobile device and transcribed verbatim. Additional information such as setting details, timelines, observations, and field notes were also documented.

Field notes, as emphasized by Emerson, Fretz, and Shaw, served as an integral part of qualitative analysis by providing context and reflections. Creswell and Watt highlighted that reflective field notes enhance rigor and support continuous improvement of interview techniques.

Data were analyzed through thematic analysis. The transcript of each interview was read repeatedly to identify essential phrases and expressions. These were manually coded and categorized into themes aligned with the study's research questions. Following van Manen and Hayes and Singh, the analysis sought to uncover the deeper meaning of lived experiences related to digital leadership readiness. Themes were compared across all participants to ensure consistency and depth.

Rigor

Rigor was ensured by maintaining consistency and clarity in the interview procedures, as emphasized by Tod. Koch stated that rigor includes credibility, transferability, and dependability. To minimize bias, the researcher maintained a reflective journal documenting observations, impressions, and potential sources of bias throughout the study.

Clear documentation of the interview process, participant selection, and data analysis procedures contributed to the trustworthiness of the study.

Validity

Validity in phenomenological research involves suspending personal biases and ensuring alignment between the research questions and the data collected. Van Manen stressed the importance of bracketing preconceived assumptions to focus fully on participants' experiences.

In this study, validity was achieved through careful selection of participants (all school heads in the district), building rapport to encourage honest responses, and ensuring that the interview questions were directly aligned with the problem statement.

Reliability

Reliability in phenomenological research does not rely on the replication of results but rather on the demonstration of consistent, transparent, and well-documented procedures. As Van Manen explained, phenomenological inquiry may yield varied interpretations even when examining the same phenomenon, which makes process-based reliability essential. In this study, reliability was ensured by verifying the accuracy of interview transcripts with the participants, by providing clear and detailed documentation of all research procedures, and by maintaining reflexive notes and memos throughout the data collection and analysis process to preserve transparency. Through these measures, the study strengthened the reliability of its findings and ensured that all interpretations were firmly grounded in the authentic experiences shared by the participating school heads.

CHAPTER IV
RESULTS

This chapter presents the results of the investigation into the digital leadership readiness of school heads in Castilla West District. As educational environments continue to evolve toward increasing technological integration, effective digital leadership becomes essential for ensuring that schools remain adaptive, innovative, and capable of meeting the demands of 21st-century learning. Understanding how school heads perceive, enact, and experience digital leadership within their respective contexts provides valuable insight into the district's overall capacity for digital transformation.

The presentation of results is guided by the research questions outlined in the Statement of the Problem. First, this chapter describes how school heads characterize their level of digital leadership readiness, offering a view of their confidence, preparedness, and adaptability in navigating digital change. Second, it examines how they demonstrate digital competencies in managing their schools, including administrative functions, communication processes, and support for technology-enhanced instruction.

Third, the chapter identifies the institutional and personal factors that school heads believe influence their preparedness to lead in a digital environment. Fourth, it explores the experiences both enabling and challenging that they encounter when implementing digital leadership practices. Finally, the findings serve as the foundation for proposing a digital leadership framework aimed at strengthening their capacity to lead in a technologically dynamic educational landscape.

1. Growing Confidence in Leading Basic Digital Initiatives

Several participants expressed moderate confidence in leading digital efforts, particularly in areas like planning, communication, and managing basic tools. They can guide others and initiate digital practices, though they still seek support for more technical aspects. Participant 1 shared, "I'm fairly confident. I can manage small digital projects like online forms or communication through email, but I still need help with more technical parts." Similarly, Participant 2 noted, "Medyo confident lang ako. Kaya ko naman mag-lead sa basic digital tasks gaya ng online reports, pero kapag may bagong app o system, kailangan ko talaga ng tulong sa mga ICT teacher namin." (I'm somewhat confident. I can lead basic digital tasks like online reports, but when there's a new app or system, I really need help from our ICT teachers.) Participant 5 added, "Somewhat confident. I can manage my staff to follow digital practices, but personally, I'm still learning how to use some applications properly." Participant 7 echoed this balance of leadership and learning: "I'm moderately confident. I try to guide my teachers in using digital tools, but I still need more exposure and training to be effective." Participant 8 reflected a similar trajectory: "I think I'm getting there. I can lead when it comes to planning and encouraging teachers, but I get nervous handling technical issues." Participant 11 also emphasized progress: "My confidence is improving. I can use digital platforms for communication and record-keeping, but I need more experience in system management." Lastly, Participant 12 stated, "I'm somewhat confident. I can lead discussions about digital plans, but I'm not yet ready to lead technical projects independently." These responses suggest a cohort of leaders who are actively developing their digital leadership capacity, particularly in non-technical domains.

Supportive but Technically Dependent Leaders

A second group of participants described themselves as supportive of digital initiatives but still heavily reliant on others especially ICT coordinators or younger colleagues for technical implementation. Participant 3 admitted, "Not too confident yet. I usually depend on our ICT coordinator or younger teachers when we start digital projects." Participant 4 shared, "I have average confidence. I can handle planning and monitoring, but I'm not good at troubleshooting or using advanced tools." Participant 6 echoed this reliance: "A little confident. I know how to use basic tools, but when problems happen, I rely on others who are more skilled." Participant 9 added, "I feel okay with administrative tools like spreadsheets or email, but I'm not confident leading digital innovations in classrooms." Similarly, Participant 13 said, "I have limited confidence. I can support digital programs, but I still rely heavily on others for the technical side." These narratives reflect a readiness to engage in digital work, but with a clear need for technical upskilling and confidence-building to transition from support roles to leadership.

Still Adjusting and Building Foundational Skills

Only one participant explicitly identified as being in the early stages of digital leadership development. Participant 10 candidly shared, "Honestly, I'm still adjusting. I find technology useful, but leading a digital project is something I'm still learning to do." This response highlights the importance of foundational training, mentorship, and gradual exposure to leadership opportunities in digital transformation.

2. **Exposure to Webinars and Formal Training Programs**

Many participants reported attending webinars, seminars, or formal training sessions mostly organized by

DepEd or their divisions focused on ICT integration, digital tools, or school information systems. These experiences provided foundational knowledge, though often limited in depth or practical application. Participant 1 shared, "I've attended webinars from DepEd about ICT integration and data privacy. They helped, but I still feel I need more practical training." Participant 3 echoed this sentiment: "I joined one short seminar on digital transformation, but it was more theory than practice." Similarly, Participant 7 noted, "I attended an online leadership course about digital school management, but it was quite general and not specific to our needs." Participant 8 added, "I joined several webinars on digital education and online learning tools. It helped me understand digital leadership a little better." Participant 11 reflected, "I attended a workshop about managing school information systems. It gave me a better idea of what digital leadership means." These responses suggest that while formal training opportunities exist, there is a strong desire for more contextualized, hands-on learning.

Basic ICT Literacy and Tool-Specific Training

Some participants received training focused on specific digital tools or basic ICT skills, often through division-led initiatives or in-house sessions. Participant 2 shared, "Naka-attend ako ng ilang training tungkol sa paggamit ng Google tools at online safety. Pero minsan, hindi ko agad ma-apply kasi kulang kami sa equipment at internet connection." (I have attended several trainings on using Google tools and online safety, but sometimes I cannot apply them right away because we lack equipment and reliable internet connection.) Participant 4 stated, "I received some in-house training on the use of DepEd systems and online reporting platforms." Participant 6 added, "Our division provided basic training in ICT literacy, focusing on Microsoft and Google applications." Participant 9 also mentioned, "I completed a short online training about Google Workspace for Education." These trainings helped build technical familiarity, but participants still face barriers such as infrastructure limitations and the need for more advanced or leadership-focused content.

Informal Learning and Peer Support

A number of participants emphasized self-directed learning and peer collaboration as their main sources of preparation. Participant 5 explained, "I only attended a few webinars during the pandemic. Most of what I know now comes from self-learning and help from my ICT coordinator." Participant 10 shared, "I haven't received formal training, but I try to learn through online videos and by asking for help from other school heads." Participant 13 added, "I've had basic training in ICT, but not specifically about digital leadership. I learn mostly through experience and peer sharing." These narratives highlight the initiative of school leaders to bridge training gaps through informal means, though they also underscore the need for structured, sustained professional development.

Need for Ongoing Mentoring and Contextual Support

Despite prior exposure to training, some participants expressed a need for ongoing mentoring and contextualized support to effectively translate their learning into practice. Participant 12 reflected, "I participated in ICT-related webinars during the pandemic, but I feel I need continuous mentoring to apply them effectively." This sentiment highlights a gap between knowledge acquisition and confident implementation, particularly in leadership contexts.

3. Strengths in Leadership, Communication, and Basic Digital Practices

Many participants feel most prepared in areas related to leadership, communication, and the use of basic digital tools. These include motivating staff, managing reports, and planning for digital integration. Participant 1 shared, "Most prepared in encouraging my staff to use digital tools." Similarly, Participant 2 said, "Mas prepared ako sa communication at pag-manage ng reports online." (I am more prepared in

communication and managing reports online.) Participant 3 noted, "Most prepared in guiding teachers," while Participant 4 emphasized, "Most prepared in making plans for digital improvement." Participant 5 added, "I feel prepared in motivating teachers to use technology," and Participant 6 mentioned, "Most prepared in using email and online forms." Participant 7 highlighted, "Most prepared in planning and documentation," and Participant 8 shared, "Most prepared in adapting to blended learning." Others echoed this trend: Participant 9 is "good at using digital tools for administrative work," Participant 10 feels "most prepared in basic computer tasks," Participant 11 can "handle online meetings and reports," Participant 12 is "most prepared in leadership and communication," and Participant 13 feels confident in "promoting digital awareness." These responses reflect a strong foundation in digital leadership and communication, particularly in non-technical domains.

Gaps in Technical Skills and System Management

Despite their strengths, participants consistently identified technical areas as their weakest points. These include troubleshooting, system setup, data security, and advanced application use. Participant 1 admitted being "least prepared in maintaining or troubleshooting digital systems." Participant 2 shared, "Least prepared ako sa data security at pag-gamit ng mga bagong applications na technical." (I am least prepared in data security and using new, technically advanced applications.) Participant 3 said, "Least prepared in setting up online platforms," while Participant 4 noted, "Least prepared in the technical setup of ICT infrastructure." Participant 5 expressed, "Least prepared in training [teachers] myself because I still lack knowledge." Participant 6 added, "Least prepared in analyzing digital data or using management systems," and Participant 7 echoed, "Least prepared in the technical operations of digital tools." Participant 8 shared, "Least prepared in monitoring digital progress and outcomes," while Participant 9 admitted being "not ready to lead in instructional technology." Participant 10 pointed to "digital security and network management" as areas of weakness, and Participant 11 said, "Least prepared in integrating advanced technology in classrooms." Participant 12 emphasized "technical implementation and troubleshooting" as a gap, and Participant 13 concluded, "Least prepared in measuring the success of digital programs in our school." These responses highlight a widespread need for capacity-building in technical competencies and digital evaluation.

Problem Statement 2: How do school heads demonstrate their digital competencies in managing their school?

4. Google Workspace as a Core Management Suite

A majority of school heads rely heavily on Google Workspace tools such as Google Forms, Docs, Sheets, and Drive for documentation, reporting, and collaboration. These tools are seen as accessible and practical for day-to-day school operations. Participant 1 shared, "I usually use Google Workspace tools like Google Forms and Google Drive for reports and document storage." Participant 2 added, "Minsan gumagamit din ako ng Google Sheets at Docs kapag may kailangan i-submit sa district office." (Sometimes I also use Google Sheets and Docs when there is something to submit to the district office.) Participant 5 emphasized, "Google Classroom and Google Drive are my main tools." Participant 7 noted, "I use DepEd Learning Management System and Google Workspace for document sharing, reports, and online meetings." Participant 8 also mentioned, "Mostly Google tools and our division's online reporting system." Participant 13 summarized their toolkit as "Google Workspace tools, DepEd LIS, and School Forms Online for managing records." These responses reflect a strong integration of Google-based platforms in administrative and instructional workflows.

Communication Tools: Messenger, Viber, and Group Chats

For real-time coordination and announcements, school heads frequently use social messaging platforms like Facebook Messenger and Viber. These tools offer immediacy and familiarity, especially in contexts with limited infrastructure. Participant 1 noted, "I also use Messenger for quick communication with teachers." Participant 2 shared, "Madalas akong gumamit ng Facebook Messenger para sa announcements at coordination." Participant 9 added, "I rely on Viber and Messenger for daily communication with teachers." Participant 8 also mentioned using "group chats for faster communication." These platforms serve as essential tools for maintaining connectivity and responsiveness within school communities.

Microsoft Office and DepEd Systems for Reporting and Data Management

Several participants continue to use Microsoft Excel and other DepEd-supported systems for reporting and data handling. Participant 4 stated, "I regularly use Microsoft Excel for reports, Google Forms for surveys, and Zoom for meetings." Participant 6 shared, "I only use basic tools like email, Excel, and Messenger." Participant 10 added, "Excel for reports," while Participant 11 mentioned, "DepEd email and Google Drive for file storage." Participant 3 also uses "email, DepEd Commons, and our official school Facebook page for updates." These tools reflect a hybrid approach that blends traditional office software with newer cloud-based platforms.

Creative and Presentation Tools for Engagement

Some school heads are also exploring creative tools to enhance communication and stakeholder engagement. Participant 5 shared, "I also use Canva sometimes for making school posters." Participant 11 added, "I also use Canva and PowerPoint for presentations." These tools support visual communication and help school leaders present information in more engaging and accessible formats.

Specialized Platforms for Records and Learning Management

A few participants mentioned using platforms tailored for education-specific functions, such as DepEd LIS and School Forms Online. Participant 13 highlighted, "DepEd LIS (Learner Information System) and School Forms Online for managing records." Participant 7 also uses the "DepEd Learning Management System." These platforms demonstrate how school heads are engaging with institutional systems to manage learner data and instructional delivery.

5. Streamlining Administrative Processes and Data Management

Many school heads have leveraged digital tools to simplify reporting, attendance tracking, and school documentation. These efforts have led to more organized workflows and reduced reliance on manual processes. Participant 1 shared, "I started using Google Forms to collect teachers' reports and attendance. It made data gathering easier and more organized compared to manual collection." Participant 5 added, "I created a shared Google Drive folder for all school files. It improved transparency and made it easier for everyone to access documents." Participant 8 echoed this with, "I introduced a digital attendance system using Google Forms. Teachers can submit attendance online, which saves time." Participant 10 noted, "We use Google Sheets to track student performance. It helps identify learners who need extra support." Participant 12 emphasized, "We started using online forms for school evaluation and monitoring, making the process faster and more accurate." These examples show how digital tools are being used to enhance efficiency and data-driven decision-making.

Enhancing Communication and Stakeholder Engagement

Technology has also played a key role in improving communication among school staff, parents, and administrators. Participant 2 shared, "Ginamit ko ang technology sa paggawa ng online feedback form para sa parents. Mas mabilis namin nakuha ang comments nila tungkol sa distance learning." (I used

technology to create an online feedback form for parents, which allowed us to receive their comments on distance learning more quickly.) Participant 4 noted, "We used digital tools for record keeping and communication, which reduced paperwork and improved response time between teachers and administration." Participant 6 said, "We used Messenger groups to remind teachers of deadlines and activities. It's simple but effective for coordination." Participant 7 added, "I used technology to conduct virtual meetings with parents and teachers, especially during emergencies. It helped maintain communication." Participant 11 shared, "I made a Facebook group for parents to receive school updates and announcements. It helped improve transparency." Participant 13 summarized, "Technology helped us improve communication and lessen paperwork. It also allowed us to document school activities easily through photos and reports online." These narratives highlight how digital platforms foster real-time coordination and inclusive engagement.

Supporting Teaching and Learning Continuity

Several school heads have used technology to support instructional delivery, especially during disruptions like the pandemic. Participant 3 reflected, "During the pandemic, I encouraged my teachers to use online platforms for their classes. It helped us continue learning despite the restrictions." Participant 9 shared, "I encouraged teachers to create PowerPoint lessons and use YouTube videos to make learning more engaging." These examples demonstrate how digital tools have enabled schools to maintain learning continuity and enrich classroom experiences.

6. Peer Mentoring and Collaborative Learning

Many school heads foster digital growth through peer-led initiatives and collaborative sharing. These approaches tap into internal expertise and build a culture of mutual support. Participant 1 shared, "I organize peer-sharing sessions where tech-savvy teachers demonstrate how to use certain apps or online tools." Participant 4 added, "I assign teachers who are good at technology to mentor others. I also make sure they get time and support to practice." Participant 9 emphasized, "I encourage collaboration among teachers so they can share digital tips." These strategies promote organic, school-based capacity building and reduce dependence on external trainers.

School-Based Trainings and Demonstrations

Several school heads initiate localized training sessions and app demonstrations to build digital confidence. Participant 2 explained, "Tinutulungan ko sila sa pamamagitan ng pag-organize ng mini-training sa school. Kapag may alam akong bagong app, pinapakita ko sa kanila kahit basic lang." (I help them by organizing mini-trainings at school. Whenever I know a new app, I show it to them even if it's just basic.) Participant 7 shared, "We hold monthly digital skills workshops where we teach basic ICT operations and online safety." Participant 10 added, "We invite resource speakers from nearby schools to teach about Google tools and online classroom management." These efforts reflect proactive leadership in contextualizing digital training to the school's needs and available resources.

Encouraging Self-Learning and Resource Sharing

Some school heads support digital growth by promoting self-paced learning and sharing accessible resources. Participant 3 noted, "I encourage them to join webinars and provide certificates as motivation." Participant 5 shared, "I always share online resources and encourage them to explore tools like Google Forms and Canva." Participant 12 added, "I support my teachers by giving them access to free online training and ensuring they have the time to attend." These approaches recognize the value of flexible, teacher-driven learning while providing institutional encouragement.

Fostering a Supportive and Growth-Oriented Environment

A few participants emphasized the importance of emotional support, recognition, and a safe space for experimentation. Participant 6 shared, "I support them by being patient and understanding when they make mistakes. I tell them it's okay to learn slowly." Participant 8 added, "I allow teachers to experiment with digital tools in their teaching and appreciate their effort, even if it's not perfect." Participant 11 stated, "I promote a learning culture in school by recognizing teachers who show improvement in their digital skills." These responses highlight the role of leadership in cultivating a psychologically safe and motivating environment for digital transformation.

Personalized Guidance and Hands-On Support

Participant 13 offered a more individualized approach: "I guide them personally when they need help, especially during report submissions and online form usage." This hands-on support ensures that teachers receive timely assistance and builds trust in the digital learning process.

Problem Statement 3: What institutional and personal factors do school heads identify as influencing their readiness to lead in the digital environment?

7. Supportive Policies and Institutional Intentions

Most school heads acknowledged that institutional policies particularly those from DepEd and their own schools are generally supportive of digital transformation. These policies encourage the use of online systems, digital documentation, and ICT integration. Participant 1 shared, "Our school supports digitalization through the use of online forms and reporting systems." Participant 3 affirmed, "We are encouraged to use digital tools for communication and documentation, which supports me." Participant 4 noted, "There are DepEd policies promoting digital transformation, which help us push for ICT integration." Participant 5 added, "Our school's ICT policy is helpful," while Participant 6 stated, "We have policies encouraging the use of online systems." Participant 9 emphasized, "DepEd mandates digital reports, which encourages us to adapt," and Participant 11 shared, "We are supported by DepEd systems like LIS and HRIS." Participant 12 concluded, "The policies are supportive," and Participant 13 acknowledged, "The school has good intentions to promote digital use." These responses reflect a clear institutional push toward digital leadership, which positively influences school heads' readiness and motivation.

Resource Gaps and Infrastructure Limitations

Despite supportive policies, nearly all participants pointed to significant resource constraints that hinder implementation. These include outdated equipment, limited budgets, unstable internet connectivity, and a lack of ICT personnel. Participant 1 noted, "Our limited number of computers and slow internet sometimes make implementation difficult." Participant 2 echoed, "Kulang kami sa resources tulad ng laptop at stable internet. Kaya kahit gusto ko, hindi agad ma-implement nang maayos." (We lack resources such as laptops and stable internet, so even if I want to, I cannot implement things properly right away.) Participant 3 added, "Our ICT equipment is outdated, and that hinders progress." Participant 4 highlighted, "The lack of proper technical support from the division office makes it hard to sustain." Participant 5 emphasized the need for "more consistent maintenance and reliable internet connection." Participant 6 shared, "We are short on laptops and projectors. It limits what we can actually do." Participant 7 stated, "The budget for ICT tools is very limited, so we rely on donations or personal devices." Participant 8 pointed out, "The lack of ICT staff is a big hindrance." Participant 9 mentioned, "Our school's weak internet signal and limited facilities are barriers." Participant 10 added, "We lack internet access in some areas, so teachers can't always comply with online requirements." Participant 11 noted, "Sometimes, these platforms are

slow or inaccessible, causing delays." Participant 12 concluded, "The actual resources, especially connectivity and devices, are not enough," and Participant 13 emphasized, "The limited budget for ICT upgrades is a challenge every year." These constraints directly affect school heads' capacity to lead digital initiatives effectively.

Personal Commitment Amid Institutional Challenges

While institutional factors play a major role, personal commitment and adaptability also influence readiness. Several participants expressed a willingness to lead despite limitations, often relying on creativity, peer support, or personal devices. Participant 7 shared, "We rely on donations or personal devices," and Participant 8 noted, "We are allowed to experiment with new technologies." These examples reflect how personal initiative can partially offset institutional gaps, though sustainable digital leadership still requires systemic support.

8. Positive Attitudes Fuel Encouragement and Innovation

Several school heads expressed a proactive and optimistic attitude toward technology, which translates into inspirational and forward-thinking leadership. They lead by example, motivate their staff, and embrace experimentation. Participant 1 shared, "Because I have a positive attitude toward technology, I try to inspire my teachers to use it even when it's difficult." Participant 2 added, "Mahilig naman ako matuto ng bagong technology kahit minsan nalilito ako… Nagiging motivation daw nila 'yon." (I enjoy learning new technology even though I sometimes get confused… They say that actually motivates me.) Participant 7 emphasized, "My interest in technology helps me to be more innovative. I like trying new tools and showing my staff that we should not be afraid of change." Participant 8 noted, "I try to lead by example, showing that learning tech skills is a continuous process." Participant 12 reflected, "My attitude is that technology is not something to fear but to explore. I encourage teachers to learn at their own pace and celebrate small progress." These responses show how a growth mindset and enthusiasm for learning can positively shape digital leadership.

Adaptive and Empathetic Leadership Styles

Some school heads described their leadership as flexible, collaborative, and empathetic shaped by their own learning journeys and limitations with technology. Participant 3 shared, "I used to be afraid of technology, but now I'm more open. This change helps me lead with more understanding and patience." Participant 4 noted, "My limited experience in technology makes me rely more on collaboration." Participant 5 explained, "I'm still learning, so my leadership style is supportive and flexible." Participant 9 added, "I didn't grow up with technology, so I'm still catching up… It makes me more empathetic to teachers who also struggle." These leaders model humility and inclusivity, creating safe spaces for their staff to grow alongside them.

Cautious and Deliberate Leadership Approaches

A few participants described a more cautious or reserved approach to digital leadership, often shaped by limited confidence or experience. Participant 6 shared, "I'm not that confident with technology, so I tend to delegate ICT-related tasks." Participant 10 admitted, "Sometimes my lack of confidence makes me hesitant to introduce new systems." Participant 11 noted, "Having some experience using digital tools makes me more comfortable… but I still need more exposure." Participant 13 explained, "Because I'm cautious with new technology, I take things step by step." These responses reflect a thoughtful, risk-aware leadership style that prioritizes clarity and gradual implementation.

9. Institutional Support from DepEd and LGUs

Many school heads acknowledged the positive impact of DepEd programs, such as digital literacy training,

online platforms, and reporting systems, in promoting digital readiness. These initiatives help build awareness, motivate adoption, and provide basic infrastructure. Participant 1 shared, "DepEd programs like digital literacy training are helpful," while Participant 4 noted, "DepEd's efforts to digitalize reports motivate us to use technology more." Participant 9 added, "DepEd programs help build awareness," and Participant 11 stated, "DepEd trainings and webinars are helpful." Participant 6 emphasized the role of government and LGU assistance: "When there's funding support, we can buy needed equipment." Participant 12 echoed this: "LGU support in providing devices and printer ink has been very helpful." Participant 13 concluded, "External support is vital. Without assistance from DepEd and local partners, it would be difficult to sustain our digital projects." These responses highlight the enabling role of institutional programs and partnerships in shaping digital leadership.

Infrastructure Challenges: Connectivity, Power, and Location

Despite institutional support, infrastructure limitations remain the most cited barrier to digital readiness. Poor internet connectivity, unreliable power supply, and geographic isolation hinder access and implementation. Participant 1 noted, "Unstable internet connection in our community is a big problem." Participant 2 shared, "Mahina talaga sa area ng school kaya kahit may training or DepEd platform, hirap kaming mag-access." (The school's connectivity is really weak, so even with training or DepEd platforms, we have difficulty accessing them.) Participant 3 added, "Power interruptions and poor connectivity still affect our readiness." Participant 5 emphasized, "Since we're far from the town proper, our internet speed and access to ICT services are both poor." Participant 8 stated, "Poor internet connectivity and lack of power supply make it hard to apply [training]." Participant 10 pointed out, "Typhoons and electricity problems affect our readiness," and Participant 11 mentioned, "We cannot join [webinars] because of poor signal and scheduling conflicts." These challenges underscore the need for targeted infrastructure investments to ensure equitable access to digital tools.

Community Engagement and Local Resourcefulness

Some school heads highlighted the role of community support in enhancing digital readiness. This includes donations, volunteer efforts, and shared resources. Participant 3 shared, "The community's support in providing extra devices really helps." Participant 7 added, "Some parents even helped us provide Wi-Fi for school use, which really boosted our digital efforts." Participant 12 noted, "Community access to reliable internet remains low," suggesting that while support exists, broader infrastructure gaps persist. These examples show how local engagement can complement institutional efforts, though sustainability depends on systemic improvements.

Problem Statement 4: What experiences have school heads encountered in implementing digital leadership practices in their school?

10. Infrastructure and Connectivity Limitations

The most frequently cited challenge is poor internet connectivity and unstable power supply, which severely hampers the implementation of digital systems. Participant 1 shared, "Our biggest challenge is the unreliable internet connection. It's difficult to implement online systems when the signal is weak or sometimes unavailable." Participant 2 echoed, "Ang hirap kapag mahina ang internet at kulang ang gamit… wala kaming sapat na laptop o printer kaya natatagalang matapos." (It's difficult when the internet is slow and resources are lacking… we don't have enough laptops or printers, so tasks take a long time to complete.) Participant 5 emphasized, "Limited budget and equipment are our constant problems." Participant 8 added, "The internet speed and frequent brownouts make it difficult to rely on digital

platforms." These responses reflect how infrastructure gaps remain a major barrier to digital transformation, especially in geographically isolated or resource-constrained schools.

Technical Support and System Reliability

Several school heads pointed to the lack of technical support and system reliability as key obstacles. Participant 4 noted, "The main challenge is the lack of technical support. When computers break or software fails, we have to wait a long time before someone can fix it." Participant 11 added, "System glitches in DepEd platforms cause delays. We often can't submit reports on time because of technical errors." These issues highlight the need for responsive ICT support systems and more robust digital platforms to ensure continuity and efficiency.

Teacher Readiness and Motivation

Resistance to change and varying levels of digital literacy among teachers also pose significant challenges. Participant 3 observed, "Most teachers are still adjusting to digital tools. Some are hesitant to try new systems because they find it complicated." Participant 6 shared, "Some older teachers are not comfortable using technology. They get anxious when we introduce new platforms." Participant 10 added, "There's a lack of motivation among some staff. They think digital work is only for the younger generation." These narratives underscore the importance of inclusive, empathetic capacity-building that addresses both skill gaps and mindset shifts.

Sustainability and Time Constraints

Even when digital initiatives are launched successfully, sustaining them remains difficult due to limited funding, inconsistent training, and competing priorities. Participant 7 explained, "Our challenge is sustainability. We can start digital programs, but maintaining them requires funding and consistent training." Participant 9 noted, "Time is also a challenge. Teachers are already busy, so learning new systems adds to their workload." These responses reflect the need for long-term planning, resource allocation, and integration of digital practices into existing workflows.

Leadership Balance and Data Management

A few school heads highlighted more nuanced challenges related to leadership adaptation and digital governance. Participant 12 shared, "One of our struggles is managing data safely. We're still learning about cybersecurity and privacy rules." Participant 13 reflected, "The biggest challenge for me is balancing traditional leadership with digital transformation, especially when not everyone is ready for change." These insights point to the evolving role of school heads as both instructional leaders and digital stewards.

11. Transition from Manual to Digital Systems

A breakthrough for many school heads was the successful shift from manual processes to digital platforms for reporting, documentation, and monitoring. Participant 1 shared, "I consider it a success that most of my teachers now use Google Forms for reports and evaluations. Before, everything was done manually." Participant 3 echoed, "We managed to shift our school reports online. It saved a lot of time and reduced paperwork." Participant 8 added, "We now use digital attendance and online forms. It made monitoring easier and less time-consuming." Participant 11 noted, "I've seen improvement in data accuracy because we use digital spreadsheets instead of manual records." Participant 13 concluded, "We were able to digitize our school documents and use cloud storage, which improved organization and accessibility." These responses reflect how digital tools have enhanced efficiency, accuracy, and accessibility in school operations.

Empowering Teachers and Building Confidence

Several school heads highlighted the growth in teacher confidence and digital competence as a key success. Participant 2 shared, "Isa sa mga tagumpay namin ay natutunan ng mga teachers ang paggamit ng Google Classroom at Drive… ngayon sila pa ang nagtuturo sa iba." (One of our achievements is that the teachers learned to use Google Classroom and Drive. now they are the ones teaching others.) Participant 6 emphasized, "Seeing teachers become more confident with technology is my greatest achievement." Participant 12 added, "Our breakthrough was building a culture of collaboration online. Teachers now share materials and help each other digitally." These examples show how digital leadership fosters empowerment, peer learning, and a supportive professional culture.

Enhancing Communication and Community Engagement

Improved communication both internally and with stakeholders was another area of success. Participant 4 stated, "My breakthrough was implementing online communication systems. Now, announcements and updates reach teachers faster and more efficiently." Participant 7 shared, "We successfully conducted virtual meetings and parent orientations… It improved our connection with the community." Participant 9 added, "Our school's Facebook page has become active. It helps us communicate with parents and showcase student achievements." These narratives highlight how digital tools strengthen transparency and stakeholder relationships.

Enriching Teaching and Learning Experiences

Some school heads observed positive changes in classroom engagement through the integration of multimedia and digital resources. Participant 10 shared, "I was happy when teachers began using multimedia in lessons. Students became more engaged and interested." These breakthroughs demonstrate how digital leadership can directly enhance instructional quality and learner motivation.

Promoting Transparency and Teamwork

Digital platforms have also contributed to a more collaborative and transparent school environment. Participant 5 noted, "I'm proud that our school now uses shared drives for documents. It promotes transparency and teamwork." This reflects how digital tools can support inclusive leadership and shared responsibility.

12. Communication and Recognition

Many school heads emphasized the importance of encouragement, clear communication, and public recognition to reduce resistance and build motivation. Participant 1 shared, "I handle resistance through encouragement and constant communication. I explain the benefits of using technology and assist when needed." Participant 2 added, "Kinausap ko nang maayos at tinuruan ko ng basic steps… kailangan lang nila ng konting push at assurance." (I talked to them properly and taught them the basic steps… they just need a little push and assurance.) Participant 5 noted, "I remind my teachers that digital change is part of modernization. I show them small examples of success to encourage them." Participant 11 highlighted, "I motivate teachers by recognizing their efforts publicly. Appreciation really helps lessen resistance." These responses show how relational leadership and positive reinforcement can foster openness to digital change.

Patience, Gradual Introduction, and Empathy

Several school heads adopt a patient and empathetic approach, recognizing that digital adoption is a learning process. Participant 3 shared, "Not everyone learns at the same pace, so I try to provide time and guidance." Participant 8 emphasized, "Understanding their fears helps me find practical solutions, like step-by-step training." Participant 9 stated, "I don't force immediate change. I introduce technology

gradually until they feel more comfortable." These strategies reflect inclusive leadership that respects individual learning curves and builds trust.

Peer Mentoring and Team-Based Support

Some leaders rely on peer mentoring and collaborative practices to ease resistance. Participant 4 explained, "I handle it by assigning mentors who can help less tech-savvy teachers. Peer support works better than pressure." Participant 7 added, "I promote teamwork and sharing. When teachers see others succeed, they become more open to learning." These responses highlight the value of community-driven learning and internal capacity building.

Resourcefulness and Adaptive Management

In response to limitations such as poor connectivity or lack of devices, school heads demonstrate flexibility and resourcefulness. Participant 6 shared, "I adjust deadlines and use offline alternatives to keep the work going." Participant 10 noted, "I look for external help or borrow devices temporarily to continue our digital activities." Participant 12 added, "Even with limited tools, we still try to be creative and resourceful." These examples show how adaptive leadership can sustain digital efforts despite systemic constraints.

Leading by Example

A few participants emphasized modeling digital practices as a way to inspire staff. Participant 13 stated, "I believe in leading by example. When my staff sees me using technology confidently, they become more willing to try it too." This approach reinforces credibility and builds collective confidence in digital transformation.

Problem Statement 5: What digital leadership framework could be proposed to strengthen their digital leadership capacity?

13. Vision, Direction, and Strategic Planning

A foundational element of digital leadership is a clear and shared vision for transformation. School heads emphasized the need for strategic direction and structured planning. Participant 1 stated, "The framework should include a clear vision for digital transformation." Participant 2 added, "Kailangan ng digital leadership framework na may malinaw na direction." (We need a digital leadership framework that gives clear direction.) Participant 3 emphasized, "It should focus on digital literacy, leadership competencies, and strategic planning skills." Participant 13 concluded, "It should have clear components on planning, implementation, monitoring, and reflection." These responses highlight the importance of intentional, goal-driven leadership in navigating digital change.

Professional Development and Mentoring

Continuous capacity-building through training, mentoring, and leadership development is seen as essential. Participant 1 called for "professional development programs for school heads," while Participant 2 stressed the need for "mentoring [and] practical na training." Participant 4 added, "A strong framework should include continuous training… and support systems that guide school heads step-by-step." Participant 10 emphasized, "It must include tools for evaluating readiness and guidelines for continuous improvement." These elements ensure that school leaders are equipped to lead confidently and adaptively.

Infrastructure, Accessibility, and Resource Support

Access to reliable ICT infrastructure and equitable resources is a recurring theme. Participant 1 noted the need for "access to reliable ICT infrastructure." Participant 2 emphasized "tulong sa resources gaya ng laptop at internet." (Assistance with resources such as laptops and internet.) Participant 6 added, "There should be emphasis on accessibility… A framework should ensure that no one is left behind." Participant

8 stressed that the framework must be "practical and flexible, suited to the realities of schools with limited resources." These responses reflect the critical role of infrastructure in enabling digital leadership.

Ethical Leadership, Data Security, and Equity

School heads also highlighted the importance of ethical considerations and inclusive practices. Participant 1 stated, "It must also emphasize data security and ethical use of technology." Participant 6 called for "digital ethics and staff empowerment." Participant 11 added, "A digital leadership framework should include ethical leadership, equity in access to technology, and strategies for sustainability." These elements ensure that digital transformation is responsible, inclusive, and values-driven.

Collaboration, Communication, and Culture Building

Fostering collaboration and a digital culture within the school community is another key component. Participant 5 emphasized "collaboration among schools" and "guidelines for integrating technology in both administrative and instructional areas." Participant 7 proposed three pillars: "leadership in innovation, managing digital resources, and building a digital culture among teachers and learners." Participant 9 added, "There should be a focus on proper communication systems, online collaboration, and data management." Participant 12 reflected, "Digital leadership is about people as much as it is about systems." These insights underscore the human dimension of digital leadership.

14. Structured and Practical ICT Training for School Heads

Many participants emphasized the need for continuous, hands-on, and leadership-specific ICT training. They expressed frustration with overly theoretical webinars and called for more practical, contextualized learning. Participant 1 stated, "I would be more effective if there was a continuous and structured ICT training program… including both leadership and hands-on technical skills." Participant 2 added, "Mas magiging effective ako kung may regular at practical na ICT training… walang actual demonstration." (I would be more effective if there were regular and practical ICT training… currently, there is no actual demonstration.) Participant 4 suggested, "Having ICT coaches who visit schools regularly to guide us in planning and implementing digital initiatives." These responses highlight the importance of sustained, experiential learning tailored to the leadership role.

Technical Support and Dedicated ICT Personnel

Several school heads identified the lack of technical support as a major barrier and called for dedicated ICT staff or district-level teams to assist with troubleshooting and implementation. Participant 3 shared, "It's hard to lead digital projects while also troubleshooting computers and connectivity issues." Participant 8 added, "A district-level team that provides hands-on workshops and troubleshooting assistance… will make implementation smoother." Participant 9 emphasized the need for "a sustainable system that provides both human and material support from ICT officers." These insights point to the necessity of institutionalizing technical support structures.

Access to Infrastructure, Budget, and Equipment

Reliable internet, functioning devices, and sufficient budget were repeatedly mentioned as foundational requirements for effective digital leadership. Participant 2 noted, "Sana rin may budget para sa gadgets at internet support." Participant 6 stated, "Access to digital tools, internet connectivity, and proper budgeting from DepEd would be a huge help." Participant 10 stressed, "No matter how trained we are, if there's no strong internet or working computer, we can't lead effectively." These responses reinforce the idea that leadership cannot thrive without the basic infrastructure to support it.

Peer Mentorship and Collaborative Networks

Mentorship and peer learning were seen as powerful enablers of digital leadership. Participant 7 proposed,

"We need a mentorship structure where experienced digital leaders can coach beginners." Participant 13 added, "Regular communication among digital leaders across districts… to share best practices and find local solutions." These suggestions reflect a desire for community-based learning and cross-school collaboration.

Administrative Support and Recognition

Some participants called for stronger administrative backing and moral encouragement from higher offices. Participant 5 shared, "School heads are left to figure out everything on their own." Participant 11 noted, "Encouragement and recognition from DepEd or the district would motivate more school heads." Participant 12 emphasized, "Leadership can't flourish without proper tools and a learning environment that values progress." These responses highlight the emotional and organizational dimensions of leadership support.

15. Shared Learning and Peer-to-Peer Capacity Building

Many school heads emphasized that collaboration fosters a culture of shared learning, where school leaders exchange strategies, experiences, and solutions to common digital challenges. Participant 1 explained, "Collaboration among schools can create a culture of shared learning… It prevents us from working in isolation." Participant 2 added, "Mas natututo kami sa isa't isa… Mas mabilis ang improvement kapag nagtutulungan." (We learn more from each other… Improvement happens faster when we work together.) Participant 4 noted, "When schools share their experiences, both successes and failures, everyone learns faster." Participant 12 highlighted, "Schools can work together to develop localized training materials and guides… which makes learning more relevant." These responses reflect how collaboration accelerates learning and contextual adaptation.

Confidence Building and Innovation

Collaboration also boosts morale and encourages innovation by exposing school heads to successful practices and creative solutions. Participant 3 shared, "It helps build confidence and encourages innovation. Seeing other schools succeed inspires us." Participant 9 added, "When ideas flow freely between schools, creative and practical solutions to digital problems emerge." Participant 11 emphasized, "It's not just about sharing tools but building a community that values progress and innovation." These insights show how collective engagement fosters a mindset of growth and experimentation.

Joint Activities and Resource Efficiency

Several participants suggested that collaboration enables joint initiatives such as seminars, training sessions, and shared ICT projects, which promote efficiency and reduce costs. Participant 5 stated, "We can conduct joint seminars or digital literacy sessions. It's more efficient." Participant 4 added, "Collaboration can also lead to shared ICT projects that save money and effort." Participant 10 noted, "Joint projects, benchmarking, and inter-school mentoring can help schools that are behind catch up faster." These examples illustrate how collaboration can optimize resources and extend support to underserved schools.

Standardization and Systemic Alignment

Some school heads highlighted the role of collaboration in establishing consistent digital practices across schools and districts. Participant 7 shared, "If schools and districts collaborate, we can establish standard digital practices and guidelines." This consistency helps align efforts and ensures that digital transformation progresses cohesively across the system.

Mentorship, Networking, and Sustainability

Finally, collaboration was seen as a pathway to building long-term networks of digital leaders who support

one another through mentoring and shared problem-solving. Participant 13 envisioned, "District-wide collaboration could lead to a network of digital leaders… It would make digital transformation more sustainable and inclusive." Participant 8 added, "Schools with better equipment can lend support to others through mentorship or shared tools." Participant 6 emphasized, "It builds stronger professional relationships among school leaders." These responses underscore the importance of relational leadership and collective resilience.

Digital Leadership Framework for School Heads

Title: Strengthening School Heads' Capacity for Transformative Digital Leadership in Philippine Basic Education

I. Rationale

As schools increasingly integrate digital systems in administration, instruction, and community engagement, school heads are expected to lead with competence, confidence, and vision. However, findings reveal that while many school leaders are open to digital transformation, they face persistent barriers such as limited infrastructure, uneven digital literacy, and lack of structured support. This framework addresses these gaps by providing a coherent structure for developing digital leadership that is inclusive, practical, and sustainable.

II. Objectives

This framework aims to:

1. Build school heads' competencies in digital planning, implementation, and evaluation.
2. Foster ethical, inclusive, and visionary digital leadership practices.
3. Strengthen support systems for continuous professional development and peer collaboration.
4. Promote the integration of digital tools in school governance, teaching, and learning.
5. Establish mechanisms for monitoring progress and sustaining innovation.

III. Core Components of the Framework

1. Vision and Strategic Planning

- Define a school-based digital transformation roadmap aligned with DepEd's ICT policies.
- Set clear goals for digital integration in administration, instruction, and stakeholder engagement.

2. Capacity-Building and Professional Development

- Provide tiered training for school heads (basic to advanced) on:
  - ICT tools for school management
  - Digital pedagogy and instructional leadership
  - Cybersecurity and data privacy
  - Change management and innovation leadership
- Include mentoring and coaching from experienced digital leaders.

3. Infrastructure and Resource Support

- Advocate for equitable access to:
  - Reliable internet connectivity
  - Functional ICT equipment
  - Technical support personnel
- Promote resource-sharing across schools and districts.

4. Culture of Collaboration and Innovation

- Establish inter-school digital leadership learning communities.
- Facilitate joint projects, benchmarking, and peer-led training.

- Encourage experimentation and localized solutions.

5. Ethical and Inclusive Leadership

- Embed principles of digital citizenship, equity, and responsible technology use.
- Ensure inclusive practices that support all staff regardless of digital proficiency.

IV. Implementation Strategies

- **Phased Rollout:** Begin with pilot schools, then scale based on readiness and feedback.
- **District-Level Support Teams:** Deploy ICT coaches and mentors to provide hands-on guidance.
- **Flexible Modalities:** Combine in-person, online, and blended learning formats.
- **Localized Adaptation:** Allow schools to contextualize the framework based on their needs and resources.

V. Monitoring and Evaluation (M&E)

M&E Dimension	Indicators	Tools/Methods	Frequency
Capacity Development	% of school heads completing digital leadership training	Training records, attendance logs	Quarterly
Implementation Progress	# of schools with digital plans and active ICT initiatives	School reports, digital portfolios	Bi-annually
Infrastructure Readiness	% of schools with basic ICT infrastructure and internet access	ICT inventory, site visits	Annually
Collaboration & Mentoring	# of peer mentoring sessions, joint projects, and inter-school exchanges	Activity logs, feedback forms	Quarterly
Impact on School Culture	Teacher and staff feedback on leadership support and digital confidence	Surveys, focus group discussions	Annually

VI. Sustainability Measures

- Integrate digital leadership into the School Improvement Plan (SIP) and Continuous Improvement (CI) processes.
- Allocate budget for ICT maintenance and professional development.
- Recognize and incentivize digital leadership innovations at the school and district levels.
- Establish a digital leadership knowledge hub for sharing resources and best practices.

VII. Conclusion

This framework positions school heads not just as implementers of digital tools, but as transformative leaders who shape inclusive, future-ready learning environments. By investing in their development and surrounding them with the right support structures, we can ensure that digital transformation in education is both meaningful and sustainable.

Figure 3 DIGITAL LEADERSHIP FRAMEWORK

CHAPTER V
DISCUSSION

This chapter presents the interpretation of findings on the digital leadership readiness of school heads in

Castilla West District. Guided by the research questions, the discussion integrates participants' responses with existing literature, highlighting convergence, divergence, and implications for practice and policy. Overall, the results show that while school heads possess fundamental digital leadership competencies particularly in communication, basic ICT use, and organizational management they continue to struggle with advanced technical skills, system management, and strategic digital planning. These patterns mirror national and global research pointing to persistent gaps in school leaders' technical proficiency despite growing expectations for digital transformation.

1. Growing Confidence in Leading Basic Digital Initiatives

Many participants reported moderate confidence in leading digital practices, especially in areas involving planning, communication, and coordination using basic technological tools. Statements from Participants 1, 2, 5, 7, 8, 11, and 12 reflect a consistent pattern: they are capable of initiating digital tasks and guiding teachers, but they lack confidence in managing technical or system-heavy responsibilities.

This trend aligns with Anderson and Dexter's (2005) assertion that school leaders often excel in *administrative* uses of technology but struggle with elevated technical competencies. Likewise, Ainley and Carstens (2018) emphasize that digital leadership in schools requires both operational and instructional competencies areas where many school heads in this study express a need for improvement.

The participants' experiences also mirror the idea of "developing digital leadership" proposed by Sheninger (2019), wherein leaders begin by mastering basic digital skills, then gradually progress to transformational leadership roles as they gain more exposure. The emphasis on "getting there," "moderate confidence," and "still learning" shows that participants are on this developmental trajectory.

Moreover, the expressed desire for further training supports Ertmer's theory on first-order (access, resources) and second-order (beliefs, confidence) barriers. Many school heads appear to have overcome first-order barriers, but second-order barriers such as low self-efficacy still inhibit full digital leadership readiness.

Supportive but Technically Dependent Leaders

The second cluster of responses reflects leaders who are supportive of digital initiatives but heavily reliant on ICT coordinators or more technologically adept colleagues. Participants 3, 4, 6, 9, and 13 illustrate this pattern.

This supports the findings of Hutchison and Reinking (2015), who noted that many school administrators recognize the value of technology but lack the technical expertise to implement it independently. Their reliance on younger or more experienced staff is consistent with the distributed leadership model, where leadership responsibilities are shared depending on expertise.

However, the dependence also highlights a potential issue: technological dependency may limit strategic decision-making, as noted by Flanagan and Jacobsen (2016). When leaders cannot fully understand or troubleshoot digital systems, their ability to spearhead innovation is constrained.

This theme also complements the framework of ISTE Standards for Education Leaders, which emphasize that leaders must be able not only to support technology use but also to model it. Participants in this group reflect strong support but limited modeling suggesting partial readiness.

Still Adjusting and Building Foundational Skills

Participant 10's response indicates minimal readiness, describing a stage of ongoing adjustment and the need for foundational training. This is not unusual; Hew and Brush (2017) argue that school leaders often start with limited digital proficiency and require structured training to build confidence.

Additionally, this participant's candid reflection resonates with Rogers' Diffusion of Innovation Theory, specifically the "early majority" and "late majority" categories, where individuals adopt new practices only after gaining sufficient assurance or observing successful use by others.

This finding also underscores the need for targeted capacity-building programs, as recommended by OECD (2019), which notes that digital transformation in education requires sustained professional development and supportive systems.

2. Exposure to Webinars and Formal Training Programs

Most participants reported having attended webinars, seminars, and workshops focused on ICT integration, data privacy, digital school management, and school information systems. These sessions, primarily led by DepEd or regional offices, provided foundational knowledge but often lacked depth and practical applicability. For example, Participants 1, 3, 7, 8, and 11 noted that while these webinars improved their conceptual understanding of digital leadership, they did not fully prepare them to implement digital initiatives in their specific school contexts.

This aligns with existing research showing that webinar-based training often focuses on theoretical frameworks rather than hands-on practice. According to Trust and Whalen (2020), many online professional development (PD) programs during and after the pandemic emphasized conceptual content at the expense of applied, context-specific problem-solving. Similarly, King (2016) observed that educational leaders benefit most from experiential learning rather than passive, lecture-style training.

The participants' experiences also reflect the argument of Darling-Hammond et al. (2017) that effective professional learning must be *sustained, collaborative, and job-embedded*. DepEd-led webinars, while valuable, may not meet these criteria, leading school heads to seek deeper, more hands-on learning opportunities.

This theme further highlights a gap between exposure and application. According to Kolb's Experiential Learning Theory, true learning requires active experimentation something most participants lacked because their training remained largely theoretical. This may explain why school heads expressed lingering uncertainty about their readiness to lead digital initiatives.

Basic ICT Literacy and Tool-Specific Training

Several participants also reported receiving training focused on basic ICT skills and specific digital tools such as Google Workspace, Microsoft applications, DepEd systems, and online reporting platforms. Participants 2, 4, 6, and 9 acknowledge that these trainings helped them understand essential digital functions.

However, many indicated persistent barriers, such as limited equipment, poor connectivity, and the absence of leadership-focused content. This aligns with Ertmer's concept of *first-order barriers*, where infrastructure and resource limitations constrain the effective use of technology. Even when training is provided, such barriers hinder the translation of learning into practice.

Moreover, these findings echo Kurtz et al. (2020), who argued that ICT literacy alone is insufficient for digital leadership; leaders must also develop competencies in digital strategy, innovation management, and instructional transformation. Participants' remarks suggest that while ICT skills improved, their training rarely addressed the more advanced leadership competencies they need.

This pattern supports earlier findings in the literature that technical training does not automatically result in digital leadership readiness (Hanna, 2021). School heads may become proficient in tools but still lack the strategic capability to lead digital transformation in their institutions.

Informal Learning and Peer Support

A notable number of participants emphasized informal, self-directed learning and peer collaboration as key sources of digital preparation. Participants 5, 10, and 13 described relying on YouTube tutorials, online self-study, and support from ICT coordinators or fellow school heads.

This aligns with studies suggesting that informal and collaborative learning pathways play a crucial role in digital competence development. According to Livingstone and Sefton-Green (2016), informal learning leverages real-life problem-solving, making it highly relevant to practitioners who need immediate, practical solutions.

Additionally, the collaborative nature of peer support reflects the principles of communities of practice (Wenger, 1998), where shared experience and collective problem-solving enhance learning and build leadership capacity. Many participants learned digital processes not through structured programs but through guidance from more knowledgeable colleagues.

However, while informal learning can fill gaps left by formal PD, it is not a substitute for institutionalized and systematic leadership training. Participants' reliance on self-learning highlights PD gaps that formal systems have yet to address, reflecting findings from OECD (2019) that school leaders often feel "underprepared" for digital transformation despite receiving sporadic training.

Need for Ongoing Mentoring and Contextual Support

Participant 12's statement expresses the need for continuous mentoring, reflecting a broader sentiment among school heads. Although many have attended ICT-related webinars, they still struggle to apply their learning confidently and effectively, particularly in leadership contexts.

This connects to Fullan's (2022) argument that leadership development requires ongoing guidance, coaching, and reflective practice. One-off sessions especially webinars rarely lead to sustained changes in leadership behavior. Similarly, Hallinger (2018) notes that digital leadership demands continuous, iterative skill-building, not isolated training events.

Furthermore, the desire for contextual support underscores the importance of localized, needs-based PD, as recommended by the National Educational Technology Plan (U.S. Department of Education, 2017). Leaders must receive training aligned with their actual school conditions, resources, and challenges.

This theme indicates that while exposure to training is present, it is insufficient without sustained mentorship, practice, and contextual alignment.

3. Strengths in Leadership, Communication, and Basic Digital Practices

The findings reveal that school heads in Castilla demonstrate substantial readiness in leadership, communication, and the use of basic digital tools areas that form the core of foundational digital leadership. Participants consistently expressed confidence in motivating staff, facilitating communication, performing administrative tasks through digital platforms, and planning for digital integration in their respective schools. These capabilities were highlighted in various responses, such as Participant 1's confidence in encouraging staff to adopt digital tools, Participant 2's ease with online communication and report management, and Participant 3's preparedness in guiding teachers. Other participants also echoed similar strengths: Participant 4 felt prepared in creating plans for digital improvement, Participant 5 emphasized readiness in motivating teachers to integrate technology, and Participant 6 noted comfort in using email and online forms. Further examples include Participant 7's competence in planning and documentation, Participant 8's adaptability in blended learning environments, and Participant 9's skill in using digital tools for administrative work. Participants 10, 11, 12, and 13 expressed confidences in basic computer tasks, managing online meetings, communicating effectively, and promoting digital awareness.

These responses suggest that school heads possess the essential leadership-oriented competencies necessary for digital transformation. Their strengths align with existing literature indicating that digital leadership is not solely defined by technical ability but also by communication, collaboration, and the capacity to inspire others. According to Sheninger (2019), effective digital leaders serve as motivators who cultivate a culture of innovation and openness to technology. This perspective is consistent with Leithwood et al. (2020), who argue that instructional and transformational leadership skills significantly influence teachers' engagement with digital tools. The participants' comfort in interpersonal and administrative aspects of digital work demonstrates that they have already overcome several second-order barriers described by Ertmer, particularly in terms of attitudes, belief systems, and willingness to adopt technology.

This readiness in non-technical domains also reflects key competencies outlined in the ISTE Standards for Education Leaders, which emphasize communication, planning, and fostering digital citizenship as critical to leading schools in technologically enhanced environments. Thus, while their digital leadership readiness may not yet be complete, the participants exhibit a crucial foundation from which more advanced digital practices can be developed.

Gaps in Technical Skills and System Management

While the school heads demonstrated strong leadership and communication competencies, the results also reveal significant gaps in technical skills and system management. Participants repeatedly identified areas such as troubleshooting, digital system maintenance, ICT infrastructure setup, data security, digital evaluation, and advanced application use as domains in which they felt least prepared. Participant 1 openly acknowledged difficulty in maintaining or troubleshooting digital systems, while Participant 2 cited limited knowledge in data security and technical applications. Participant 3 expressed challenges in setting up online platforms, and Participant 4 admitted limited preparedness in handling ICT infrastructure. Other participants echoed these concerns: Participant 5 noted difficulty in training teachers due to limited technical knowledge, Participant 6 admitted challenges in analyzing digital data, and Participant 7 found technical operations of digital tools to be a weak point. Participant 8 also described difficulty in monitoring digital outcomes, while Participants 9, 10, and 11 expressed uncertainties in leading instructional technology, managing networks, and integrating advanced technologies in classrooms. Participants 12 and 13 similarly emphasized the need for improved troubleshooting skills and better tools to measure digital program success.

These findings align with a consistent pattern in international studies, which often point out that school leaders tend to be competent in administrative and leadership tasks but lack advanced technical proficiency. Hutchison and Reinking (2015) identified technical skills as one of the most persistent barriers to effective digital leadership, while Flanagan and Jacobsen (2018) emphasized that leaders often struggle to manage digital systems independently, thereby impeding the overall pace of digital transformation. The difficulties expressed by participants in areas such as cybersecurity, digital evaluation, and system configuration suggest that many still face first-order barriers, including lack of resources, technical training, and confidence to manage complex systems barriers identified by Ertmer as foundational challenges to technology integration.

Additionally, the participants' perceived weaknesses align with Fullan's (2015) argument that digital leadership requires strategic competence in data usage, problem-solving, and innovation management. Without these technical capacities, leadership roles often become limited to supportive or supervisory functions, restricting school heads' ability to drive meaningful transformation. The challenges described

also reflect gaps in upskilling programs, reinforcing OECD's (2019) call for sustained, practice-based training that equips school leaders with both managerial and technical digital competencies.

Problem Statement 2: How do school heads demonstrate their digital competencies in managing their school?

4. Google Workspace as a Core Management Suite

A majority of school heads continue to rely heavily on Google Workspace applications as their primary digital ecosystem for managing school operations. Tools such as Google Forms, Docs, Sheets, Drive, and Classroom are consistently cited as indispensable for documentation, reporting, file storage, collaboration, and even instructional tasks. Participant 1 explained that they "usually use Google Workspace tools like Google Forms and Google Drive for reports and document storage," highlighting the platform's accessibility. Participant 2 added that they also utilize "Google Sheets and Docs kapag may kailangan i-submit sa district office," demonstrating the role of Google tools in meeting external reporting demands. Participant 5 emphasized that "Google Classroom and Google Drive are my main tools," pointing to their dual use in administrative and instructional contexts. Similar patterns appeared across responses: Participant 7 shared their use of both the DepEd Learning Management System and Google Workspace for document sharing, reports, and online meetings, while Participant 8 mentioned relying on "mostly Google tools and our division's online reporting system." Participant 13 described a comprehensive toolkit involving "Google Workspace tools, DepEd LIS, and School Forms Online for managing records." These responses show that Google-based platforms remain central to the workflow of school heads, serving as a practical and widely adopted foundation for daily tasks.

Communication Tools: Messenger, Viber, and Group Chats

Real-time communication and quick coordination among school personnel are largely facilitated through social messaging platforms such as Facebook Messenger, Viber, and various group chats. These tools are valued for their immediacy, convenience, and widespread familiarity, especially in contexts where more formal communication channels are unavailable or cumbersome. Participant 1 noted the practicality of using Messenger for urgent communication with teachers, while Participant 2 stated they frequently rely on Facebook Messenger for announcements and coordination. Participant 9 explained that they depend on Viber and Messenger for daily communication with teachers, and Participant 8 emphasized using group chats for faster, more responsive exchanges. These platforms thus function as essential communication tools within school communities, enabling school heads to disseminate information quickly and maintain consistent interaction with stakeholders.

Microsoft Office and DepEd Systems for Reporting and Data Management

In addition to cloud-based tools, many school heads continue to utilize Microsoft Office applications especially Excel as well as DepEd-supported platforms for reporting, data management, and documentation. These systems provide familiar and reliable structures for handling formal requirements. Participant 4 shared that they regularly use Microsoft Excel for preparing reports, along with Google Forms for surveys and Zoom for virtual meetings. Participant 6 described using basic tools such as email, Excel, and Messenger for daily tasks, while Participant 10 and Participant 11 similarly relied on Excel, DepEd email, and Google Drive for data handling and file storage. Participant 3 further mentioned using email, DepEd Commons, and the school's official Facebook page for disseminating updates. These responses reflect a hybrid digital practice wherein school heads integrate traditional office software with newer cloud-based platforms to meet the varying demands of administrative work.

Creative and Presentation Tools for Engagement

Some school heads have also incorporated creative and presentation tools to enhance stakeholder engagement and produce visually appealing communication materials. These tools allow leaders to present information in more dynamic and accessible formats. Participant 5 mentioned using Canva to create school posters, while Participant 11 explained that they use both Canva and PowerPoint for preparing presentations. Such practices show how digital creativity supports school leadership, particularly in designing announcements, visual reports, and other materials aimed at improving communication and community engagement.

Specialized Platforms for Records and Learning Management

A number of participants also reported using specialized digital platforms intended for educational records and instructional management. These systems are particularly important for ensuring data accuracy, compliance with DepEd requirements, and streamlined handling of learner information. Participant 13 highlighted the use of DepEd LIS (Learner Information System) and School Forms Online for managing student records, while Participant 7 shared their experience with the DepEd Learning Management System in supporting instructional documentation and online learning. These tools demonstrate that school heads are engaging with institutional platforms that require greater familiarity with data structures and formal digital processes, expanding their responsibilities beyond simple documentation into structured digital management.

5. Streamlining Administrative Processes and Data Management

The findings show that school heads in Castilla actively leverage various digital tools to streamline administrative work, strengthen communication, and support instructional delivery. Their experiences highlight meaningful progress toward digital transformation, although this progress remains shaped by contextual limitations and varying levels of digital fluency. In line with earlier themes of developing digital readiness, these results demonstrate how school leaders translate their competencies particularly in basic digital practices and communication—into practical applications that enhance school operations.

Across the interviews, school heads consistently described how digital tools enabled them to simplify reporting systems, organize documentation, and reduce manual processes. Many began integrating platforms such as Google Forms, Google Drive, and Google Sheets to manage attendance, monitor student performance, and coordinate school-level submissions. These practices illustrate a shift toward data-driven decision-making and more efficient workflow processes.

This finding supports the argument of Huber (2021), who emphasizes that digital leadership naturally begins with improving administrative efficiencies before advancing toward instructional transformation. Furthermore, Schleicher (2020) noted that digital tools can significantly reduce administrative workload for school leaders, allowing them to allocate more time to pedagogical leadership. The school heads' use of cloud-based platforms particularly for documentation and record-keeping aligns with these perspectives, showing that even basic digital competencies can meaningfully improve school operations when strategically applied.

However, the school heads' reliance on user-friendly platforms such as Google Workspace also reflects the earlier finding that most leaders feel more confident with basic digital practices than with advanced system management. Their adoption of digital tools is practical and beneficial, but often limited to applications that require minimal technical expertise. This demonstrates progress, but also reveals the need for institutional support to help leaders gradually expand into more complex digital leadership functions.

Enhancing Communication and Stakeholder Engagement

The results also reveal that communication is one of the strongest domains of digital practice among school heads. Platforms such as Facebook Messenger, Viber, and group chats are widely used to coordinate tasks, disseminate announcements, and maintain regular contact with teachers and parents. These tools are familiar, accessible, and effective in low-resource settingsaligning with Ritchie's (2021) view that digital leadership must be context-responsive and grounded in tools that stakeholders can readily use.

Participants described how digital communication enhanced transparency, strengthened parent engagement, and improved coordination among faculty. This is consistent with the findings of Aladwan and Rawadieh (2022), who argue that digital communication platforms contribute to more participatory and collaborative school environments. The school heads' ability to sustain active communication channels also reflects the leadership strength they previously identified in managing teams and facilitating information flow.

Notably, the widespread use of social messaging tools underscores the importance of accessibility over technical sophistication. These platforms do not require advanced ICT skills, making them a natural fit for school heads who are confident communicators but still developing deeper digital competencies. Thus, the use of Messenger and Viber reflects both the leaders' strengths and the practical constraints of their local contexts.

Supporting Teaching and Learning Continuity

A number of school heads also described using digital tools to support instructional delivery, particularly during the pandemic. Encouraging teachers to use online platforms, presentations, and multimedia resources helped maintain learning continuity during disruptions. This finding aligns with Maher and Prescott's (2022) assertion that digital leadership involves ensuring that teaching remains adaptive, resilient, and learner-centered in the face of challenges.

The school heads' experiences also reflect the broader global trend in which educational leaders began relying more heavily on technology to sustain learning during emergencies (UNESCO, 2020). Although the participants' contributions to instructional technology were often supportive rather than technically specialized, their initiative to promote digital tools in teaching reveals an emerging instructional dimension of digital leadership.

This theme also reinforces earlier findings about strengths in leadership and communication: school heads were able to encourage teachers, promote collaboration, and help sustain morale even when technological conditions were not ideal. However, the limited mention of more complex instructional technologies also echoes the earlier gap in technical proficiency, suggesting that school heads still require additional training to lead deeper forms of digital instructional innovation.

6. Peer Mentoring and Collaborative Learning

The findings reveal that school heads in Castilla actively promote digital competence within their schools by relying on peer mentoring, school-based training, self-directed learning, and supportive leadership practices. These strategies highlight grassroots, collaborative approach to digital transformation, aligning with literature suggesting that effective digital leadership emerges not only from technical expertise but from the ability to foster shared learning environments (Aksal, 2019). Overall, the school heads demonstrate a strong commitment to building internal digital capacity even amid limited external support and varying levels of individual ICT proficiency.

One of the most prominent approaches described by participants is the use of peer mentoring and collaborative learning. Across the interviews, school heads explained how they organize peer-sharing

sessions, assign tech-savvy teachers to assist others, and encourage collaboration in using digital tools. This collective learning model reflects the principles of distributed leadership, where expertise is shared rather than centralized (Harris, 2020). Participants' accounts show that digital capacity within schools grows more effectively when teachers learn from one another in familiar, context-rich environments.

These findings also align with earlier results indicating that many school heads themselves feel more confident in leadership and communication than in advanced technical skills. By empowering knowledgeable teachers to share their expertise, school heads reinforce their strengths as facilitators of learning rather than sole sources of technical guidance. This collaborative approach helps mitigate the reliance on external ICT trainers and builds long-term school-based digital resilience.

School-Based Trainings and Demonstrations

Many school heads also initiate localized training sessions within their schools, offering app demonstrations, monthly workshops, and small-group training tailored to the needs of their teachers. These practices demonstrate proactive leadership, particularly in contexts where external digital training programs may be insufficient or too generalized. As participants explained, localized initiatives allow school heads to contextualize digital tools to their school's specific operations, instructional requirements, and resource availability.

This aligns with the findings of Herring et al. (2022), who emphasize that digital leadership is most effective when training is situated within real school contexts. The school heads' ability to invite resource persons from neighboring institutions further demonstrates the value of inter-school collaboration, mutual support, and community-driven capacity building. These localized initiatives also reinforce earlier themes about digital readiness, showing how school leaders strategically leverage accessible tools to meet immediate operational needs while gradually building more advanced digital competence among teachers.

Encouraging Self-Learning and Resource Sharing

In addition to structured training, school heads also encourage teachers to pursue self-paced learning. Many participants described promoting webinars, sharing online resources, and providing teachers with the flexibility and time to explore digital tools independently. This approach supports the idea that digital leadership involves fostering a culture of continuous professional learning rather than relying solely on formal training (Dexter, 2018).

The encouragement of self-directed learning aligns with teachers' diverse learning styles and availability. It also mirrors the school heads' own pathways toward digital growth, as earlier findings revealed that several of them rely on self-learning and peer support to strengthen their digital skills. By promoting autonomy in learning, school heads create an environment where teachers can develop confidence and digital fluency at a pace suited to their needs and comfort levels.

Fostering a Supportive and Growth-Oriented Environment

Another key finding is the school heads' emphasis on emotional support, psychological safety, and recognition. Participants discussed being patient with teachers learning digital tools, allowing them to experiment without fear of judgment, and acknowledging improvements in digital competence. These practices reflect transformational leadership, which highlights the importance of motivating and empowering staff to embrace change (Leithwood & Sun, 2020).

A supportive environment is especially critical in schools where teachers may feel anxious or overwhelmed by technological demands. By fostering trust and validating teachers' efforts, school heads help cultivate a culture where digital exploration becomes a shared journey rather than a pressured obligation. This is consistent with literature on digital innovation, which emphasizes that supportive

leadership climates enhance teachers' willingness to adopt and sustain new technologies (Tondeur et al., 2019).

Personalized Guidance and Hands-On Support

Finally, some school heads offer individualized assistance to teachers, especially during digital reporting, form completion, or submissions. This hands-on approach ensures that teachers receive timely and personalized support when facing challenges. Individual guidance not only resolves immediate technical difficulties but also builds teacher confidence, strengthening their willingness to engage with digital tasks independently in the future.

This finding also complements earlier themes showing that many school heads view themselves as still building digital competence. Their willingness to assist teachers individually reflects humility, relational leadership, and a recognition that digital transformation requires supportive interpersonal dynamics, not just technical skills.

Problem Statement 3: What institutional and personal factors do school heads identify as influencing their readiness to lead in the digital environment?

7. Supportive Policies and Institutional Intentions

The findings indicate that most school heads recognize a strong institutional push toward digital transformation, particularly through DepEd policies and school-level initiatives encouraging the use of online systems, digital documentation, and ICT-integrated processes. Participants consistently cited DepEd platforms such as LIS and HRIS, as well as school-initiated ICT policies, as enabling environments that promote digital readiness. This aligns with the idea that policy direction is a key determinant of digital leadership behavior (Davis & Laas, 2015; Li, 2020), wherein leaders are more likely to adopt digital practices when institutional structures support technological integration.

The perception of supportive policies echoes the findings of Buenavista (2021), who emphasized that DepEd's digital governance frameworks particularly those developed after the implementation of the DepEd Computerization Program (DCP) serve as catalysts for ICT adoption among school leaders. Similarly, studies in comparable educational settings show that when leaders perceive policies as aligned with innovation goals, their readiness and motivation to lead digital initiatives increase significantly (Ertmer & Ottenbreit-Leftwich, 2010; Ghavifekr & Rosdy, 2015).

In the context of Castilla, these findings reveal that school heads do not lack institutional direction; rather, policies function as motivators and foundation points for leadership engagement in digital transformation. However, as subsequent themes show, supportive policy alone cannot compensate for on-the-ground barriers.

Resource Gaps and Infrastructure Limitations

Despite supportive institutional intentions, the participants described persistent resource-related constraints limited hardware, outdated equipment, unstable connectivity, insufficient ICT personnel, and inadequate budgets. These findings reinforce long-standing challenges documented in Philippine public schools, where infrastructure remains one of the weakest components of ICT integration (Orong, 2021; Avila & Trinidad, 2020).

International literature also supports this pattern: countries with developing economies often experience a "policy–practice gap," where digital transformation is encouraged at the policy level but hindered by lack of resources (Tondeur et al., 2017; UNESCO, 2020). The experiences of the participants such as reliance on personal devices, slow DepEd platforms, or inconsistent internet access demonstrate a similar gap in

Castilla. These issues significantly affect implementation capacity and can restrict the effectiveness of even motivated and digitally aware school heads.

The tension between policy direction and infrastructural limitation is particularly important in digital leadership. As Acoin (2018) noted, digital leadership readiness is not solely psychological or attitudinal; it is also contextual. School heads may be prepared and willing but unable to actualize digital plans due to structural deficiencies. Thus, although policies encourage digital transformation, resource gaps limit the depth and consistency of digital leadership practices in the schools.

Personal Commitment Amid Institutional Challenges

Despite infrastructural barriers, participants demonstrated strong personal commitment to leading digital initiatives. Several school heads described using personal devices, sourcing donations, experimenting with new technologies, or depending on collegial support to overcome limitations. This reflects a high level of individual agency, which studies identify as a critical factor in successful digital leadership (Fullan, 2015; Anderson & Dexter, 2020).

The finding also affirms Ertmer's (2019) distinction between *first-order* barriers (infrastructure, resources) and *second-order* barriers (beliefs, attitudes). While first-order barriers were clearly present, the participants' willingness to adapt shows that second-order variables such as motivation, openness to innovation, and personal initiative were relatively strong. This means that school heads are not resistant; rather, they are constrained.

Moreover, the participants' adaptive strategies highlight the resilience and creativity typical of school leaders operating in resource-limited contexts. Research on leadership in developing educational systems similarly observes that personal commitment often compensates for organizational weaknesses, at least temporarily (Sheninger, 2019; Hallinger, 2018). However, scholars warn that relying on individual initiative is not sustainable in the long term. Without systemic support particularly stable funding, technical personnel, and continuous training digital leadership readiness cannot fully translate into digital transformation.

8. Positive Attitudes Fuel Encouragement and Innovation

The findings show that many school heads exhibit highly positive attitudes toward technology demonstrating enthusiasm, openness to learning, and a willingness to model digital practices. Participants described inspiring teachers by using technology themselves, celebrating small progress, and maintaining a growth mindset despite challenges. This aligns with research indicating that leaders' attitudes toward technology significantly influence school-wide digital adoption (Ertmer & Ottenbreit-Leftwich, 2015; Sheninger, 2019). When school heads embrace innovation, they create a culture of openness, experimentation, and continuous improvement.

Participant narratives reflect characteristics of transformational digital leadership, such as leading by example, motivating followers, and fostering a vision of innovation (Leithwood & Jantzi, 2005). Leaders who demonstrate excitement for new tools and a willingness to learn even when unsure help normalize risk-taking and experimentation among teachers. Similar findings were reported by Ghavifekr and Rosdy (2015), who emphasized that teacher engagement in ICT increases when school leaders model positive digital behaviors. In the context of Castilla, these attitudes provide a strong internal foundation for digital readiness, even amid resource constraints.

Adaptive and Empathetic Leadership Styles

Beyond positive attitudes, several school heads described flexible and empathetic leadership styles shaped by their personal struggles with technology. Participants shared experiences of initially fearing digital

tools but gradually learning to adapt. This humility fosters a supportive climate where teachers feel safe to learn at their own pace an approach consistent with distributed and human-centered digital leadership frameworks (Dexter, 2018; Fullan, 2015).

The leaders' openness to collaboration, reliance on peers, and acknowledgment of their own limitations also mirror findings from international studies showing that successful digital leadership requires emotional intelligence, adaptability, and shared decision-making (Hallinger, 2018; Anderson & Dexter, 2020). Their empathy toward teachers who struggle with ICT suggests that digital leadership is not merely technical but relational a balance of guiding, supporting, and learning together. In settings like Castilla, where technologies evolve faster than training opportunities, such empathetic leadership becomes critical in sustaining teacher motivation and reducing resistance to change.

Cautious and Deliberate Leadership Approaches

Some school heads reported more cautious, deliberate, or hesitant approaches to digital leadership, primarily due to limited confidence or exposure to technology. They described delegating ICT tasks, introducing changes gradually, or avoiding rapid implementation. This pattern aligns with literature showing that leaders with lower digital self-efficacy are more likely to adopt incremental rather than transformative strategies (Tondeur et al., 2017).

However, cautious leadership should not be interpreted as ineffective. In fact, studies by Spillane (2012) and Acoin (2018) suggest that incremental, risk-aware approaches are common in contexts with limited resources or technical support conditions similar to those described in Castilla. Leaders who lack strong ICT backgrounds often choose phased implementations, ensuring that both staff and infrastructure can keep pace with change.

The participants' cautious stance reflects realistic and context-sensitive leadership. Given the infrastructural barriers identified in the earlier themes, their careful decision-making may prevent burnout, confusion, or resistance among teachers. Nonetheless, this finding also highlights the need for sustained ICT capability-building among school heads to increase their confidence and readiness for more ambitious digital initiatives.

9. Institutional Support from DepEd and LGUs

The findings reveal that institutional support particularly from DepEd and local government units (LGUs) plays a significant role in strengthening school heads' digital readiness in Castilla. Participants frequently acknowledged the value of DepEd-led initiatives such as digital literacy training, online reporting systems, and capacity-building webinars. These programs help enhance awareness, encourage adoption of digital tools, and establish baseline competencies. This aligns with the findings of Orong (2021) and Buenavista (2021), who emphasized that DepEd-driven ICT initiatives, including the DepEd Computerization Program (DCP) and nationwide digital literacy training, contribute significantly to improving ICT readiness in public schools.

Moreover, LGU assistance such as funding for equipment, providing devices, and supporting consumables was viewed as highly impactful. Such partnerships echo UNESCO's (2020) recommendation that local governments and education departments must collaborate to ensure equitable digital transformation, especially in rural communities. As Participant 13 highlighted, sustaining digital initiatives requires continuous external support; without it, schools may struggle to maintain digital systems or upgrade their technologies.

These observations are consistent with research showing that strong institutional backing can directly influence the success of digital leadership (Dexter, 2018; Hallinger, 2018). School heads who receive

adequate training, resources, and policy alignment are more likely to develop the confidence and competence needed to guide their institutions toward digital transformation.

Infrastructure Challenges: Connectivity, Power, and Location

Despite the positive influence of DepEd and LGU programs, infrastructure weaknesses remain the most significant barrier to digital readiness. Participants commonly identified unstable internet connectivity, frequent power interruptions, geographic isolation, and vulnerability to natural disasters as ongoing obstacles. These challenges mirror national and global findings indicating that digital divides are most pronounced in rural schools, where connectivity and technological infrastructure lag behind urban centers (UNESCO, 2020; Asian Development Bank, 2021).

The participants' experiences such as being unable to access DepEd platforms, join webinars, or fully utilize training demonstrate the persistent disconnect between digital initiatives and actual technological capacity in the field. This reflects the "infrastructure gap" described by Tondeur et al. (2017), in which policy-driven digital innovation fails to translate into practice due to limited technological foundations.

In the specific context of Castilla, connectivity problems and power issues undermine the potential benefits of DepEd programs. Even highly motivated school heads cannot fully implement digital changes when basic utilities are unreliable. This reinforces the argument that digital leadership readiness is multifaceted: it requires not only skills and motivation but also stable infrastructure to enable sustainable digital practices.

Community Engagement and Local Resourcefulness

Beyond institutional support, several school heads highlighted the important role played by the local community in enhancing digital readiness. Community initiatives such as providing extra devices, assisting with Wi-Fi, offering volunteer help, or sharing resources demonstrate how grassroots engagement can fill gaps left by institutional limitations. These examples align with the concept of "community-driven digital resilience" found in studies of rural education systems (Trinidad, 2021; Fullan, 2014), where local stakeholders contribute actively to sustaining ICT initiatives.

However, participants also acknowledged that community support is uneven and often constrained by broader infrastructure challenges. For example, even when parents or local volunteers assist in providing connectivity, weak internet service across the community limits the overall impact. This indicates that while community involvement can temporarily alleviate resource shortages, long-term sustainability requires systematic and government-led infrastructure development.

The findings suggest that in Castilla, digital leadership readiness is strengthened by collaborative efforts among DepEd, LGUs, and community stakeholders. This multi-stakeholder approach aligns with research asserting that successful digital transformation in schools is most effective when supported by layered networks of institutional and community partners (Anderson & Dexter, 2020).

Problem Statement 4: What experiences have school heads encountered in implementing digital leadership practices in their school?

10. Infrastructure and Connectivity Limitations

The findings indicate that infrastructure challenges particularly poor internet connectivity, inconsistent electricity, and insufficient technological equipment are the most critical barriers to digital transformation among schools in Castilla. Participants consistently highlighted unreliable internet service, frequent brownouts, limited laptops, and insufficient ICT tools as obstacles to implementing digital systems. These concerns strongly mirror national and international research documenting that infrastructure remains the

foundational barrier to effective digitalization in rural and geographically isolated schools (UNESCO, 2020; Asian Development Bank, 2021).

In the Philippine context, Avila & Trinidad (2020) similarly noted that while digital policies and training are expanding, many public schools still operate with outdated hardware, unstable networks, and inadequate technical facilities. The experiences of the participants reflect this "digital divide," where schools with fewer resources struggle more to meet digital requirements. This confirms Dexter's (2018) assertion that digital leadership cannot flourish when basic technological conditions are unstable. In Castilla, infrastructure limitations affect not only daily operations but also the ability of school heads and teachers to confidently adopt and sustain digital tools.

Technical Support and System Reliability

Beyond connectivity and equipment, participants also identified limited technical support and system glitches as significant challenges. Schools often lack onsite ICT personnel, resulting in delayed repairs and prolonged workflow disruptions. DepEd platforms while useful were also described as prone to glitches, causing delays in report submission and digital processes.

These findings are consistent with Ertmer's (2015) classification of first-order barriers, which includes inadequate technical support as a major hindrance to ICT integration. Studies by Anderson & Dexter (2020) further emphasize that digital leadership effectiveness increases when leaders have access to responsive technical assistance and reliable systems. Without such support, school heads must expend additional time and effort troubleshooting issues, diverting attention from other leadership responsibilities. The reliance on centralized technical support, which may be slow or limited, highlights the need for decentralized ICT units or designated school-level ICT coordinators to ensure sustainability and efficiency.

Teacher Readiness and Motivation

The results also show varied levels of teacher readiness, with hesitation, anxiety, and resistance to change emerging as recurring concerns. Older teachers or those with less digital exposure were described as struggling more with new platforms, while others lacked motivation or felt overwhelmed.

These findings align with literature on second-order barriers affective, attitudinal, and belief-related challenges that influence ICT adoption (Ertmer & Ottenbreit-Leftwich, 2010). Studies in similar educational contexts suggest that without adequate training, mentoring, and supportive leadership, teachers may perceive digital work as burdensome or intimidating (Ghavifekr & Rosdy, 2015). The participants' narratives illustrate how digital leadership is deeply tied to emotional and psychological readiness, not just technical skill.

This underscores the importance of building a school culture where learning technology is normalized, nonjudgmental, and paced appropriately, particularly for teachers who feel left behind by rapid technological change.

Sustainability and Time Constraints

Another recurring theme is the difficulty of sustaining digital initiatives over time. Even when digital programs or tools are initially introduced, maintaining them requires consistent training, funding, and dedicated time resources that many schools lack. Teachers' existing workloads further complicate the integration of new systems.

Similar findings appear in studies examining digital transformation in schools, which note that sustainability requires long-term planning, predictable budgeting, and continuous professional

development (Fullan, 2015; Hallinger, 2018). In many public schools, digital initiatives fail not because of poor leadership but because of inconsistent resources or misalignment with teachers' capacities.

Participant insights highlight that digital transformation is an ongoing process, not a one-time adoption. For schools in Castilla, sustainability hinges on ensuring recurring funding, scheduling flexibility, and training cycles aligned with teachers' workloads and levels of readiness.

Leadership Balance and Data Management

Finally, school heads expressed more nuanced challenges involving digital governance, including data security, cybersecurity awareness, and balancing traditional leadership responsibilities with new digital demands. These concerns reflect the evolving expectations for school leaders in the digital era, who must now oversee not only administrative and instructional tasks but also digital policy, data privacy, and technological change management.

Research by Sheninger (2019) and Acoin (2018) emphasizes that modern school leaders are required to act as digital stewards ensuring safe data practices, modeling digital citizenship, and managing the ethical complexities of technology. Many school heads in Castilla are still developing these competencies, highlighting the need for specialized training in cybersecurity, digital ethics, and data governance.

Balancing traditional and digital roles is a common struggle for leaders in emerging digital systems. The participants' experiences affirm the argument that digital leadership requires both new skill sets and redefined leadership identities.

11. Transition from Manual to Digital Systems

The findings show that one of the most significant breakthroughs among school heads in Castilla is the successful shift from manual to digital systems for reporting, documentation, and administrative tasks. Participants described improvements in efficiency, accuracy, and organization after adopting tools such as Google Forms, digital spreadsheets, cloud storage, and online attendance systems. This aligns with global trends in educational leadership, where digital workflow systems are recognized as catalysts for improved management efficiency and reduced administrative burden (Sheninger, 2019; Li, 2020).

The transition aligns with studies demonstrating that digital record-keeping enhances transparency, minimizes human error, and accelerates data processing (Tondeur et al., 2017; UNESCO, 2020). In the Philippine context, similar findings were noted by Avila & Trinidad (2020), who emphasized that schools integrating digital platforms experience smoother reporting and faster decision-making. The participants' experiences affirm that adopting digital systems is one of the most tangible and transformative indicators of digital leadership readiness.

Empowering Teachers and Building Confidence

The growth in teacher confidence and digital competence emerged as another key achievement. Participants highlighted how teachers learned platforms such as Google Drive, Google Classroom, and other digital applications eventually mentoring colleagues and collaborating online. This reflects the principles of distributed leadership, where empowerment and peer learning foster shared responsibility and innovation (Leithwood & Jantzi, 2005; Fullan, 2015).

Teachers becoming more capable and confident also supports earlier findings on mindset shifts. According to Ertmer & Ottenbreit-Leftwich (2015), teacher self-efficacy is central to sustaining ICT integration. When school heads cultivate supportive environments, teachers are more willing to experiment with new tools and overcome anxiety about technology. The reported increase in peer mentoring and collaborative digital practices mirrors results from Ghavifekr & Rosdy (2015), who found that teacher-to-teacher support accelerates school-wide digital adoption.

In Castilla, these achievements show that digital leadership is not merely about technology implementation it is about empowering people.

Enhancing Communication and Community Engagement

Participants also described how digital communication platforms such as online messaging systems, virtual meetings, and institutional Facebook pagesstrengthened communication with teachers, parents, and the wider community. Improved information flow and faster dissemination of announcements reflect the role of technology in enhancing transparency and stakeholder engagement.

These findings are consistent with research showing that digital communication tools support more responsive and inclusive school governance (Hallinger, 2018; Anderson & Dexter, 2020). In rural communities, active online platforms also serve as a bridge to families who may have limited in-person access to school events or updates (UNESCO, 2020). The successful implementation of virtual orientations and meetings demonstrates how digital leadership can expand community involvement, especially during times of limited mobility or emergency disruptions.

In Castilla, technology has become a vital tool not only for internal communication but also for strengthening school–community partnerships.

Enriching Teaching and Learning Experiences

Some school heads observed improvements in classroom engagement through multimedia integration and digital resources. Teachers' use of videos, presentations, and other digital tools reportedly increased student interest and participation. This aligns with literature confirming that ICT-enhanced instruction promotes active learning, improves motivation, and supports diverse learning needs (Ghavifekr & Rosdy, 2015; Sheninger, 2019).

These breakthroughs indicate that digital leadership also has instructional implications. By encouraging and supporting technology integration, school heads indirectly influence the quality of teaching and learning. The findings support Fullan's (2015) argument that leadership is most effective when it fosters pedagogical innovation alongside operational efficiency.

Promoting Transparency and Teamwork

Finally, the adoption of shared drives and collaborative platforms was identified as a significant achievement that promotes transparency, accountability, and teamwork. Participants noted that shared digital workspaces create a more inclusive and organized environment where teachers can access documents, share files, and track school processes.

This finding resonates with studies highlighting how digital collaboration tools strengthen collective leadership and improve organizational culture (Dexter, 2018; Hallinger, 2018). When information becomes more accessible, decision-making becomes more democratic, and team cohesion improves. For schools in Castilla, digital platforms are helping shift leadership dynamics from individual-led to team-based, fostering stronger professional relationships.

12. Communication and Recognition

The findings reveal that effective communication, encouragement, and recognition are central strategies that school heads use to reduce resistance and motivate teachers toward digital adoption. Participants emphasized the role of clear explanations, reassurance, and appreciation in building openness to technological change. This aligns with transformational leadership theory, which highlights the importance of inspirational motivation and individualized consideration in influencing positive organizational behavior (Bass & Riggio, 2020).

Public recognition, as described by Participant 11, functions as a form of positive reinforcement that increases willingness to engage in new practices. Research supports this approach, showing that acknowledgment of effort boosts teacher morale and accelerates the adoption of innovations (Fullan, 2016; Hallinger, 2018). In the context of Castilla, these relational leadership practices help cultivate trust and reduce anxiety toward digital tools.

Overall, communication and recognition emerge as essential relational strategies that strengthen teacher engagement in digital transformation.

Patience, Gradual Introduction, and Empathy

Many school heads adopt a patient and empathetic approach, recognizing that teachers have varying levels of digital readiness. Gradually introducing technologies, providing step-by-step guidance, and allowing time for adjustment reflect an inclusive and humane leadership style. These findings are supported by research indicating that empathy and respect for individual learning curves foster a psychologically safe environment conducive to change (Ertmer & Ottenbreit-Leftwich, 2015; Tondeur et al., 2017).

Gradual implementation also aligns with change management models, such as Kotter's (2015) stepwise approach, which stresses the importance of pacing reforms to avoid resistance and burnout. In rural settings like Castilla, where digital exposure varies widely among teachers, this strategy is especially effective. The participants' responses demonstrate that sustainable digital integration requires not only technical support but also emotional support.

Peer Mentoring and Team-Based Support

Another significant strategy identified is the use of peer mentoring and collaborative support systems. Assigning technology mentors and promoting teamwork help ease anxiety among less tech-savvy teachers. These practices reflect distributed leadership, where expertise is shared and learning becomes a collective endeavor (Spillane, 2020; Harris, 2015).

Studies show that teachers learn more effectively from colleagues who understand their context and challenges (Ghavifekr & Rosdy, 2015). Peer modeling also normalizes digital use and fosters a culture of mutual support. In small rural schools, where formal ICT training may be limited, peer mentoring becomes a practical and powerful approach to internal capacity building.

The experiences of participants highlight the importance of community-driven learning in sustaining digital transformation efforts.

Resourcefulness and Adaptive Management

Participants also demonstrated resourcefulness in dealing with constraints such as limited connectivity, shortage of devices, and infrastructural gaps. Strategies such as adjusting deadlines, using offline alternatives, seeking external support, and borrowing devices illustrate adaptive leadership an approach characterized by flexibility, creativity, and responsiveness to contextual challenges (Heifetz, Grashow, & Linsky, 2009).

These findings align with research showing that school leaders in resource-limited environments must be innovative in problem-solving to sustain ICT initiatives (Anderson & Dexter, 2020; UNESCO, 2020). Such adaptive practices allow schools to continue their digital efforts despite systemic limitations, reaffirming the role of leadership resilience in educational technology integration.

In the Castilla district, these actions demonstrate that digital transformation is possible even in the face of logistical barriers when leaders adopt flexible and pragmatic approaches.

Leading by Example

A number of participants emphasized modeling digital behaviors as a leadership strategy. Demonstrating confidence and competence in using technology reinforces leader credibility, setting a practical standard for teachers to follow. This approach resonates with social learning theory, which posits that individuals are more likely to adopt behaviors they observe in credible role models (Bandura).

Research in digital leadership similarly highlights the importance of leaders who model effective technology use to inspire staff and promote digital culture (Sheninger, 2019; Dexter, 2018). In schools where teachers may feel hesitant, seeing the school head actively use digital tools reduces fear and reinforces the message that technology is both necessary and manageable.

In Castilla, leading by example contributes to building collective confidence and accelerating the digital transition.

Problem Statement 5: What digital leadership framework could be proposed to strengthen their digital leadership capacity?

13. Vision, Direction, and Strategic Planning

The responses clearly emphasize that a strong digital leadership framework must begin with a coherent and shared vision. Participants highlighted the need for strategic direction, well-defined goals, and structured planning processes. This aligns with existing literature asserting that vision-setting is a core component of effective digital leadership, guiding organizational priorities and ensuring alignment across stakeholders (Sheninger, 2019; Hallinger, 2018).

A vision-driven framework enables school heads to move from reactive to proactive approaches, especially in navigating rapid technological changes. As Participant 13 noted, the inclusion of components such as planning, implementation, monitoring, and reflection ensures that digital initiatives follow a cyclical, evidence-driven process. This echoes Fullan's (2016) call for coherence-making, where leaders intentionally shape the direction and pace of change.

Professional Development and Mentoring

Another central element identified is the need for ongoing professional development and mentoring for school leaders. Participants emphasized that leadership in the digital era requires continuous learning, practical training, and structured support systems. This reflects broader research showing that effective digital leadership is highly dependent on leaders' own technological competence and confidence (Tondeur et al., 2019).

Mentoring and hands-on capacity-building, as described by Participants 2 and 4, support the development of digital leadership competencies such as problem-solving, instructional innovation, and data-driven decision-making. Continuous training also aligns with the concept of lifelong learning a necessary mindset in a digital landscape that constantly evolves.

The participants' insights affirm that digital leadership frameworks must embed sustained, context-responsive professional development, not one-time workshops.

Infrastructure, Accessibility, and Resource Support

Access to reliable infrastructure emerged as a recurring requirement. Participants stressed the importance of devices, connectivity, and equitable resource distribution conditions that research consistently identifies as foundational to any meaningful digital transformation (Anderson & Dexter, 2020; UNESCO, 2020).

Participant 8's comment on the need for a framework that is "practical and flexible" resonates strongly with the challenges faced by geographically isolated schools in Castilla. The findings reinforce that

without adequate infrastructure, even well-designed leadership initiatives face serious implementation barriers.

Furthermore, Participant 6's emphasis on accessibility underscores the importance of bridging the digital divide. A digital leadership framework must therefore support not just technological capacity, but also equitable access for all teachers and learners.

Ethical Leadership, Data Security, and Equity

Participants also highlighted ethical considerations as essential aspects of a digital leadership framework. These include data security, digital ethics, and promoting fairness in the use of technology. Such concerns align with global recommendations emphasizing responsible digital governance, especially in educational settings handling sensitive student records (ISTE, 2018; OECD, 2021).

The responses demonstrate that school heads view digital leadership not only as technical management but also as moral stewardship. Ensuring safety, inclusivity, and ethical use of digital tools reflects a values-driven approach to transformation one that prioritizes the well-being and rights of the school community. Participant 11's emphasis on sustainability and equity further supports calls for frameworks that balance innovation with accountability, transparency, and long-term continuity.

Collaboration, Communication, and Culture Building

Lastly, participants underscored the human dimensions of digital leadershipcollaboration, communication systems, and cultivating a digital culture. This aligns with research showing that technology integration succeeds when leaders foster shared ownership, professional collaboration, and positive attitudes toward innovation (Spillane, 2006; Harris, 2015).

The focus on communication systems and online collaboration reflects shifts toward more networked, participatory leadership practices. As Participant 12 emphasized, "Digital leadership is about people as much as it is about systems" a sentiment that encapsulates the essence of modern educational leadership. Building a digital culture, as proposed by Participant 7, ensures that technology use becomes embedded in everyday teaching, learning, and administrative processes. Such culture-building requires relational leadership, open dialogue, and supportive structures that help teachers internalize digital practices.

14. Structured and Practical ICT Training for School Heads

Participants underscored the importance of continuous, hands-on, and leadership-focused ICT training as a core requirement for enhancing digital leadership. Their concerns mirror existing literature, which criticizes one-size-fits-all webinars for lacking depth, contextual relevance, and opportunities for real application (Tondeur et al., 2016; Dexter & Richardson, 2020).

Many school heads expressed clear frustration with theory-heavy training sessions and highlighted the need for experiential learning that integrates both technical competencies and leadership decision-making. As Participant 1 emphasized, a structured, ongoing program covering digital tools and leadership strategies would substantially improve their effectiveness.

This aligns with digital leadership models emphasizing practice-based learning, coaching, and iterative skill development critical components for navigating complex digital transformations in schools (Sheninger, 2019). The suggestion of ICT coaches visiting schools (Participant 4) reflects global best practices where coaching and on-site mentoring have proven to be more impactful than purely virtual or lecture-style training.

Technical Support and Dedicated ICT Personnel

A prominent theme is the urgent need for dedicated technical support systems. School heads noted that they often serve as both leaders and troubleshooters an unsustainable burden that diverts their attention fr-

om strategic planning and instructional leadership.

These experiences reflect a broader challenge in many low-resource education systems where technical support is either minimal or absent (UNESCO, 2020). Participant 3's observation that leading digital initiatives while fixing hardware issues is "hard" highlights the operational strain on school leaders.

Requests for district-level ICT teams and dedicated personnel (Participants 8 and 9) align with international frameworks recommending institutionalized support structures to ensure consistent maintenance, troubleshooting, and capacity-building. Such systems not only reduce downtime but also promote smoother implementation of digital initiatives.

Access to Infrastructure, Budget, and Equipment

Consistent with earlier themes, participants reiterated that adequate infrastructure, reliable internet, functional devices, and sufficient funding is fundamental for effective digital leadership. This reflects the notion that leadership capacity cannot compensate for systemic resource shortages (Anderson & Dexter, 2020).

Participant 10's statement that "no matter how trained we are," leadership becomes ineffective without basic infrastructure encapsulates a critical insight: digital leadership is deeply intertwined with the broader technological ecosystem.

These responses highlight the need for budget allocations, procurement systems, and resource equity to be embedded within any digital leadership framework. Without these foundations, digital initiatives risk becoming unsustainable or symbolic rather than transformative.

Peer Mentorship and Collaborative Networks

The desire for peer mentorship and inter-school collaboration reflects a growing recognition that digital leadership thrives in community-based ecosystems. Participants envisioned mentorship structures where experienced leaders coach beginners (Participant 7), creating a cycle of shared learning, problem-solving, and capacity development.

This aligns with distributed leadership theory, which emphasizes collaboration, trust-building, and shared responsibility across stakeholders (Hargreaves & O'Connor, 2018). Cross-district communication networks, as proposed by Participant 13, foster innovation diffusion allowing digital leaders to exchange strategies, contextual solutions, and emerging practices.

Such professional networks also promote a culture of continuous improvement and collective efficacy key drivers of sustainable digital transformation.

Administrative Support and Recognition

Participants also emphasized the emotional, motivational, and organizational dimensions of digital leadership. Several noted that school heads are often expected to navigate digital initiatives independently, without adequate guidance or encouragement from higher offices.

This lack of systemic support may weaken morale and reduce leaders' willingness to take risks or innovate. Consistent with literature on transformational and supportive leadership, recognition and encouragement from district or DepEd-level administrators can significantly enhance motivation and commitment (Leithwood & Sun, 2018).

Participant 12's reflection that leadership "can't flourish without proper tools and a learning environment that values progress" highlights the interplay between psychological safety, institutional culture, and effective leadership. A supportive environment reinforces the identity, confidence, and agency of school heads as digital leaders.

15. Collaborative Learning as a Catalyst for Digital Leadership Development

The findings highlight that collaboration is an essential driver in strengthening school heads' digital leadership capabilities. Participants repeatedly emphasized that shared learning environments help school leaders navigate the complexities of digital transformation. For example, Participant 1 stressed that collaboration "prevents us from working in isolation," indicating an awareness that digital leadership cannot thrive within siloed environments. This aligns with the theory of *communities of practice* (Lave & Wenger), which asserts that individuals learn more effectively when engaged in collective problem-solving and knowledge-sharing within a shared domain.

Participant 12's insight regarding the creation of localized training materials underscores the importance of contextualized professional learning. Local adaptation is especially relevant in the Philippine educational context, where disparities in ICT access, infrastructure, and policy implementation vary widely among schools. Through collaboration, school heads can modify, co-create, and disseminate training content that reflects their unique digital landscape—thus accelerating the pace at which digital competencies are developed. This also resonates with *adult learning theory* (Knowles), which promotes relevance, autonomy, and immediate applicability as key factors in meaningful professional development.

Collectively, the participants' responses suggest that collaboration promotes a dynamic learning environment where school heads do not merely replicate best practices but reinterpret and contextualize them to fit local needs. This makes collaborative learning a transformative mechanism that bridges practice gaps across different school settings.

Enhancing Confidence, Professional Identity, and Innovation Through Collaboration

A recurring theme in the participants' responses is the powerful influence of collaboration on school heads' self-efficacy and motivation to innovate. Participant 3 described collaboration as a source of confidence, while Participant 11 framed it as a foundation for building a community that values progress and innovation. These sentiments reflect findings from Hargreaves and O'Connor's (2018) theory of Collaborative Professionalism, which argues that educators demonstrate higher levels of creativity and risk-taking when they feel supported by trusted professional networks.

In digital leadership, confidence is particularly important because technological change often introduces uncertainty and requires experimentation. When school heads observe peers successfully implementing digital innovations such as learning management systems, mobile apps, or digital monitoring tools they develop a belief that similar improvements are achievable in their own schools. This phenomenon mirrors Rogers' Diffusion of Innovations theory (2015), which emphasizes the role of peer modeling and interpersonal communication in accelerating the adoption of new technologies.

Furthermore, collaboration allows school leaders to normalize failure as a learning opportunity. Participant 4 highlighted the value of sharing both successes and failures, a critical insight that demonstrates psychological safety a core condition for innovation culture (Edmondson, 2019). When failures are seen as collective learning moments rather than personal shortcomings, leaders feel more empowered to test digital practices and refine them.

Thus, collaboration functions not only as a technical exchange mechanism but also as an emotional and motivational support system that strengthens leaders' sense of identity, courage, and willingness to innovate.

Joint Activities, Shared Resources, and System Efficiency

Collaboration also emerged as a practical strategy for maximizing limited resources, which is particularly relevant in public school contexts with significant budget constraints. Participants described how joint

seminars, digital literacy sessions, and inter-school ICT projects create efficiencies that would be unattainable if each school operated independently. Participant 5 emphasized that shared activities are "more efficient," while Participant 10 noted the potential for benchmarking and mentoring to help struggling schools accelerate their progress.

These insights reflect the principles of *networked improvement communities* (Bryk et al., 2015), where organizations work collectively toward common goals using shared resources, data, and interventions. In resource-deficient environments, such as many Philippine schools, collaboration becomes a mechanism for democratizing access to learning opportunities, technical expertise, and digital tools.

Shared ICT projects like pooled funding arrangements or communal training hubs also increase the scalability of digital transformation. Instead of each school separately procuring tools or hiring ICT trainers, districts can coordinate collective investments that benefit multiple institutions. This reduces redundancy, promotes equitable access, and fosters system-wide capacity building. In this way, collaboration acts as a strategic lever for distributing both the *cost* and the *benefits* of digitalization more effectively.

Standardization and Systemic Alignment Across Schools and Districts

Several participants highlighted collaboration as a platform for creating standardized digital practices across schools and districts. Participant 7 emphasized that collaboration supports the establishment of "standard digital practices and guidelines," a crucial component of system coherence. In fragmented educational systems, inconsistent digital practices can hinder data integration, monitoring, and instructional alignment. Thus, collaborative efforts such as district-wide committees or inter-school working groups become mechanisms for harmonizing protocols, documentation, and digital workflows.

This aligns with Fullan's (2015) concept of *coherence building*, which posits that collective clarity and shared direction are necessary for successful and sustained educational change. When schools uniformly implement digital standards such as cybersecurity policies, data privacy protocols, or standardized digital forms administrative efficiency increases and teachers receive clearer guidance.

Standardization is particularly important for ensuring continuity during disruptive events like pandemics, natural disasters, or shifts to remote learning. By maintaining consistent digital procedures, schools can respond more predictably and cohesively during crises.

Mentorship, Professional Networks, and Sustainable Leadership Development

Participants articulated a strong belief that collaboration supports the long-term sustainability of digital transformation. Mentorship emerged as a critical component, where more digitally advanced schools provide guidance, technical assistance, or equipment to less-resourced schools. Participant 8 noted that schools with better equipment can assist others, reflecting a commitment to equity and collective upliftment.

Participant 13 envisioned district-wide networks of digital leaders who continuously support one another a vision consistent with *distributed leadership* frameworks, which emphasize shared responsibility rather than hierarchical control (Spillane, 2020). Such networks have been shown to foster resilience, continuity, and sustained innovation because leadership capacity does not rely on a single individual but is distributed across a community.

These professional networks also serve as a foundation for relational leadership, where trust, mutual respect, and shared values drive continuous improvement. The formation of long-term digital leadership networks strengthens institutional memory and ensures that digital initiatives persist even with leadership turnover.

CHAPTER VI
CONCLUSION

This chapter presents the final synthesis of the study Exploring Digital Leadership Readiness Among School Heads in Castilla**.** It brings together the major findings, revisits the research questions, and highlights how school heads understand and demonstrate digital leadership amid varying levels of ICT access, competence, and institutional support. The chapter also outlines the study's contributions, implications for policy and practice, and areas for further research. Overall, this conclusion reinforces the importance of strengthening digital leadership readiness to support effective and sustainable digital transformation across schools in Castilla.

PROBLEM STATEMENT

This study explored the digital leadership readiness among school heads in Castilla West District. Specifically, addressed the following research questions:

1. How do school heads in Castilla West District perceive their level of digital leadership readiness?
2. How do school heads demonstrate their digital competencies in managing their school?
3. What institutional and personal factors do school heads identify as influencing their readiness to lead in a digital environment?
4. What experiences have school heads encountered in implementing digital leadership practices in their school?
5. What digital leadership framework could be proposed to strengthen their digital leadership capacity?

Findings

1. The school heads in the Castilla West District show a growing level of digital leadership readiness and they are confident in communicating, planning digital tasks, and encouraging their teachers however, they are held back by limited technical skills, little hands-on ICT training, and the need to rely on more tech-capable staff.
2. The school heads of Castilla West demonstrate digital competence by using tools like Google Workspace, messaging apps, Microsoft Office, and DepEd systems to manage communication, reports, and school data. They support teachers through peer mentoring, school-based trainings, and a supportive learning environment, helping strengthen digital practices across their schools.
3. The school heads of Castilla West shared that both their schools and DepEd support digital work, but poor internet, old equipment, and lack of ICT staff make it hard to implement. Many school heads are motivated, open to learning, and adaptable, though some still lack confidence in using technology. Support from DepEd, LGUs, and the community helps, but weak infrastructure remains the biggest challenge to becoming fully ready for digital leadership.
4. The school heads of Castilla West faced many challenges in practicing digital leadership, such as slow internet, limited devices, lack of technical help, and teachers' different skill levels. Even so, they made progress by moving from manual to digital processes, improving communication, building teacher confidence, and strengthening teamwork. They handled resistance through clear guidance, gradual support, peer mentoring, flexibility, and by modeling digital practices themselves
6. To strengthen digital leadership, school heads propose a framework that includes: (1) a clear digital vision and plan, (2) continuous hands-on ICT training and mentoring, (3) reliable infrastructure and technical support, (4) ethical and inclusive technology use, and (5) strong collaboration and a supportive digital culture. Overall, they call for a framework that is practical, supportive, and aligned with the realities of schools.

Conclusions

1. The school heads of Castilla West exhibit developing digital leadership readiness, showing strong motivation but limited by gaps in technical skills and ICT experience.
2. School heads effectively utilize digital tools and mentoring practices, demonstrating functional digital competence that enhances school operations and performance.
3. Although institutional support is present, infrastructure limitations such as weak connectivity and outdated equipment hinder full digital leadership readiness.
4. Despite challenges, school heads make meaningful progress in digitalizing processes through communication, guidance, peer support, and digital role modeling.
5. School heads emphasize the need for a realistic digital leadership framework grounded in clear vision, continuous ICT capacity-building, reliable infrastructure, collaboration, and ethical technology use.

Recommendations

1. Provide continuous hands-on ICT training for school heads to strengthen their technical skills and confidence in using digital tools.
2. Develop a clear and realistic digital transformation plan that outlines goals, timelines, roles, and resources for organized and purposeful implementation.
3. Upgrade ICT infrastructure and enhance technical support by improving connectivity, updating devices, and ensuring the presence of trained ICT personnel.
4. Promote collaboration and peer mentoring among school heads and teachers to cultivate and sustain a strong digital culture.
5. Adopt a practical digital leadership framework that includes a clear roadmap, ongoing ICT training, improved infrastructure, data privacy measures, and strong collaborative practices to support sustainable digital transformation.

Future Research Directions

Future research may expand the exploration of digital leadership readiness among school heads by examining areas that were beyond the scope of this study but are essential for a deeper understanding of digital transformation in schools. First, researchers may investigate teachers' digital competencies, attitudes, and expectations, as these significantly shape how school heads implement digital initiatives. Understanding teacher readiness will provide a more comprehensive picture of how leadership and teaching practices interact in a digital environment.

Additionally, future studies could focus on the direct impact of ICT infrastructure such as internet stability, device availability, and presence of ICT personnel on the effectiveness of digital leadership. Longitudinal research may be beneficial in determining how improvements in infrastructure influence school operations and leadership performance over time. Another promising direction is the development, pilot-testing, and refinement of the proposed digital leadership framework. Evaluating its effectiveness in real-world school settings would allow researchers to identify which components are most useful, what adjustments are needed, and how the framework can be scaled across different contexts.

Research could also explore the roles of district-level support systems, such as ICT coordinators, technical teams, and digital coaches, in strengthening school heads' leadership capacity. Studies comparing digital leadership readiness across districts or regions may offer insights into best practices, common barriers, and successful models that can guide national-level policymaking.

Moreover, future investigations may examine how digital leadership influences student outcomes, such as digital literacy, engagement, academic performance, and access to learning opportunities. Understanding this connection can highlight the broader impact of leadership effectiveness beyond school management. Researchers may also explore how community and LGU partnerships contribute to sustaining digital initiatives, particularly in resource-limited schools. This could uncover strategies for long-term, community-driven digital transformation.

Lastly, qualitative studies focusing on the lived experiences of school heads particularly their emotional, psychological, and professional challenges could provide a richer understanding of what digital leadership demands in the Philippine school context. These expanded directions will help build a stronger foundation for policy development, capacity-building programs, and sustainable digital transformation efforts in basic education.

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