



International Journal of Artificial Intelligence and Machine Learning

Publisher's Home Page: <https://www.svedbergopen.com/>



Research Paper

Open Access

Driving Transformation Through Digital Leadership

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<https://Orcid.Org/0009-004-1605-5310>

ABSTRACT

This study investigated the digital transformational leadership strategies educational leaders use to implement digital transformation initiatives and the factors that facilitate and impede successful implementation, focusing on digital capability and culture. The quantitative and qualitative data were gathered, analyzed, and interpreted using convergent parallel mixed method design.

It was found that educational leaders have an intermediate level in several digital competencies, such as digital communication, teamwork, and the use of ICT. However, there is still a gap in advanced skills like digital creation and innovation.

It was also found that educational leaders practice strategies that allow them to engage in various initiatives promoting creative and innovative technology culture. These strategies include promoting stakeholder involvement, setting an example, educating the public about digital transformation, and envisioning future classrooms that are equipped with cutting-edge technology that fosters a better educational experience for the students. However, generational divide, resource and connectivity, cultural shifts, distance, and overcrowding hinder digital technology adoption and integration. To overcome these barriers, deliberate attempts to close the gaps between cultural norms and digital capability, stressing the value of lifelong learning and fostering a welcoming and encouraging digital culture.

Keywords: digital transformational leadership, digital capability, digital culture, digital creation, digital innovation.

1. Introduction

Digital capabilities enable organizations to observe, imagine, understand, and focus on digital transformation's potential. The rapid and exponential changes in the global digital world demand educational leaders to transcend their standard competencies and lead digital transformation initiatives prioritizing quality, relevance, flexibility, and equity. Elliot (2023) noted that a gap in digital leadership exists, necessitating educational leaders to motivate students to engage in digital activities. However, the complexity of technology integration often becomes an afterthought. Digital leaders play a critical role in driving change and supporting decisions during digital transformation, motivating and inspiring their teams to adapt to the overwhelming changes brought by digitalization (Kohli & Johnson, 2011). Effective leadership is essential for designing and coordinating programs that enhance instruction delivery, leading to increased student involvement in a continuously evolving educational landscape (Nita & Gut, 2023).

To foster innovation and value creation in a complex environment, educational leaders must leverage digital technology and demonstrate strong digital leadership. This includes successfully incorporating digital technology into teaching strategies and cultivating a digitally transformed organizational culture. Key elements of digital transformational leadership involve defining clear plans for technology integration, providing necessary resources and support, and empowering staff and teachers to use digital tools (Glover et al., 2016). Leaders are expected to foster a creative and change-oriented culture within their institutions, which is crucial for successfully implementing digital transformation efforts (Gurr et al., 2019). This involves considering vast amounts of data in novel ways to develop innovative models and platforms (Boulton, 2019).

There is a notable gap in understanding how digital transformational leadership and organizational culture interact within educational settings. This research aimed to investigate this connection and examine how digital leadership and cultural transformation are perceived, approached, and implemented in educational

institutions. Specifically, the study aims to determine whether the current cultural norms and values within institutions align with the requirements of the digital transformation process. By addressing this gap, the research seeks to provide insights to help educational leaders navigate organizational and IT strategy convergence, integrate digital tools effectively and create a supportive culture for digital transformation. The findings will contribute significantly to the existing knowledge on digital transformational leadership and organizational culture, offering practical strategies for educational leaders to overcome challenges and foster a successful digital revolution in their institutions.

2. Methodology

This investigation employed a mixed-methods approach, combining quantitative and qualitative designs to gather, analyze, and compare data before interpretation. Educational leaders participating in the Smart Learning Communities pilot project in one of the cities in the Philippines were the primary subjects, selected based on their roles within the DepEd program and SLC implementation. Quantitative Data were collected through a self-report survey on digital competence and semi-structured interviews, providing insights into leaders' strategies and experiences with digital transformation initiatives. The study's findings were analyzed using weighted means for quantitative data and the Gioia methodology for qualitative data, which employed the processes of induction and transduction to generate the first order concepts, second order themes, and aggregate dimension. To establish the relationship between the quantitative and qualitative data, a joint data analysis was also conducted, and meta inferences were derived.

3. Results and Discussion

3.1. Educational Leaders' Level of Digital Capability

Evaluating educational leaders' digital capabilities is essential to develop strategies that work, encourage creativity, and guarantee a dynamic, future-ready educational system. Digital capability refers to the individual's ability to use digital technology critically and successfully for leadership, education, and learning. "It is important to have a solid understanding of technology to make informed decisions about its integration in education" (Graham, 2019; Voogt et al., 2018). Figure 2 shows the educational leaders' level of digital capability across various domains.

The educational leaders' self-assessment of their ICT proficiency reveals a solid intermediate level across various digital skills. Leaders exhibit competence in navigating the internet and managing digital files, reflecting a robust foundation in utilizing technology for efficient collaboration and communication. Their strength lies in tasks such as uploading and downloading materials, which are essential for collaborative endeavors (Graham, 2019; Voogt et al., 2018). The skills evaluated along information, media, and data literacy fall into the intermediate level, indicating challenges in utilizing technology, locating, managing, and organizing digital content (Levin & Schrum, 2014). In digital creation, scholarship, and innovation, the educational leaders showed a beginner level of capability, highlighting a need for advanced research techniques and coding enhancement. Strengthening these skills aligns with the transformative role of digital leadership in

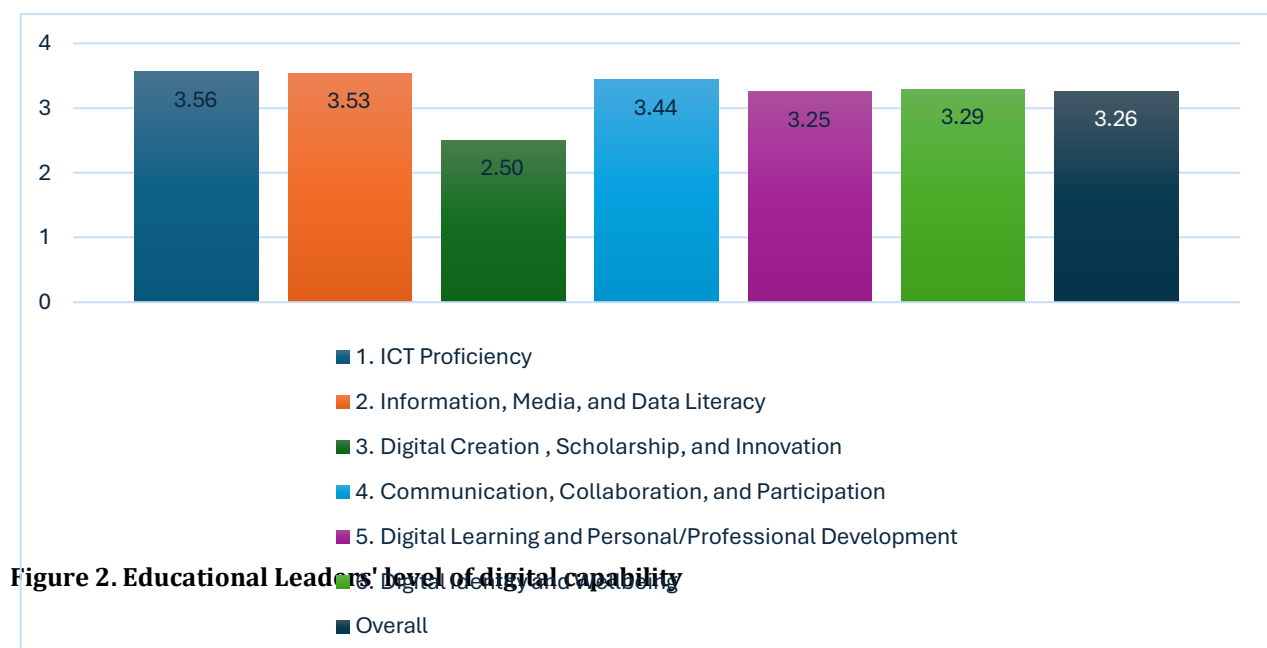


Figure 2. Educational Leaders' level of digital capability

governance and driving organizational success through strategic technological advancements (McGill, 2023; Peng, 2022; Wiyono et al., 2023).

Educational leaders exhibit intermediate capability in digital communication, collaboration, and participation, showcasing a strong understanding of communication methods and digital etiquette. However, areas like leveraging digital tools for educational purposes and active participation in online communities need further attention to enhance their digital capabilities (Wempen, 2015; Yusuf & Yusuf, 2018; Oberer & Erkollar, 2018). Leaders demonstrate intermediate capability in digital learning and personal/professional development but require improvement in areas like copyright understanding and data analysis. Strengthening these competencies is crucial for better information management and ethical compliance (European Commission, 2017; Levin & Schrum, 2014).

Finally, in managing digital identity and wellbeing, the respondents reported an intermediate level of capability. Areas like maintaining a digital portfolio and sharing learning achievements digitally require improvement. Strengthening these aspects can enhance their digital leadership traits, contributing to effective digital identity management and wellbeing in both personal and professional spheres (Gilster, 1997; Carr, 2010; Twenge & Campbell, 2018).

3.2. Digital Leadership Practices of the Educational Leaders in Leading Digital Transformation Initiatives

As depicted in Figure 3, data revealed two aggregate dimensions: driving digital transformation and enabling & sustaining digital transformation in education. Through the second-order themes, these aggregate dimensions are the overarching concepts that captured the Digital Leadership Practices of the Educational Leaders in implementing digital transformation initiatives.

3.2.1. Driving Digital Transformation in Education

Driving digital transformation in education encompass the primary programs, strategies, and attitudes that promote integrating digital technologies in the classroom. These forces are crucial in creating a conducive environment for digital transformation, shaping stakeholders' and educators' perspectives on technology usage in educational settings. For instance, awareness and education are pivotal; educational leaders make teachers aware of what digital transformation entails and motivate them to embrace it. As one respondent put it, "Letting our teachers know what Digital Transformation is" and "motivating them to accept Digital Transformation" are essential steps in this process (R4, R12). Educators enhance understanding and acceptance of digital changes by aiding and explaining processes to stakeholders.

Mastery of digital technologies is another essential driver. Educational leaders must be proficient in these technologies to guide digital transformation initiatives effectively. One respondent highlighted the importance of self-education: "I'm learning on my own, so I know what to tell the teachers" (R6). This indicates a commitment to acquiring the necessary skills to lead by example. Leaders who understand and utilize digital tools can better support their colleagues and promote a culture of technological integration.

Collaboration and communication are also fundamental to successful digital transformation: open communication, collaborative instruction, and support for professional growth foster innovation and ease technology integration. Respondents emphasized the importance of including teachers in the transformation process recognizing their valuable insights. One respondent noted, "Suggestions come from teachers, especially that they are still young and are exposed to technology. They are brilliant" (R6). This participatory approach leverages the strengths of younger, tech-savvy teachers, aligning with Boulton's (2019) idea of focusing on talented employees to drive digital transformation initiatives.

Effective digital leaders inspire others with a vision for the organization's digital future. They must cultivate an open and eager attitude toward learning, envision

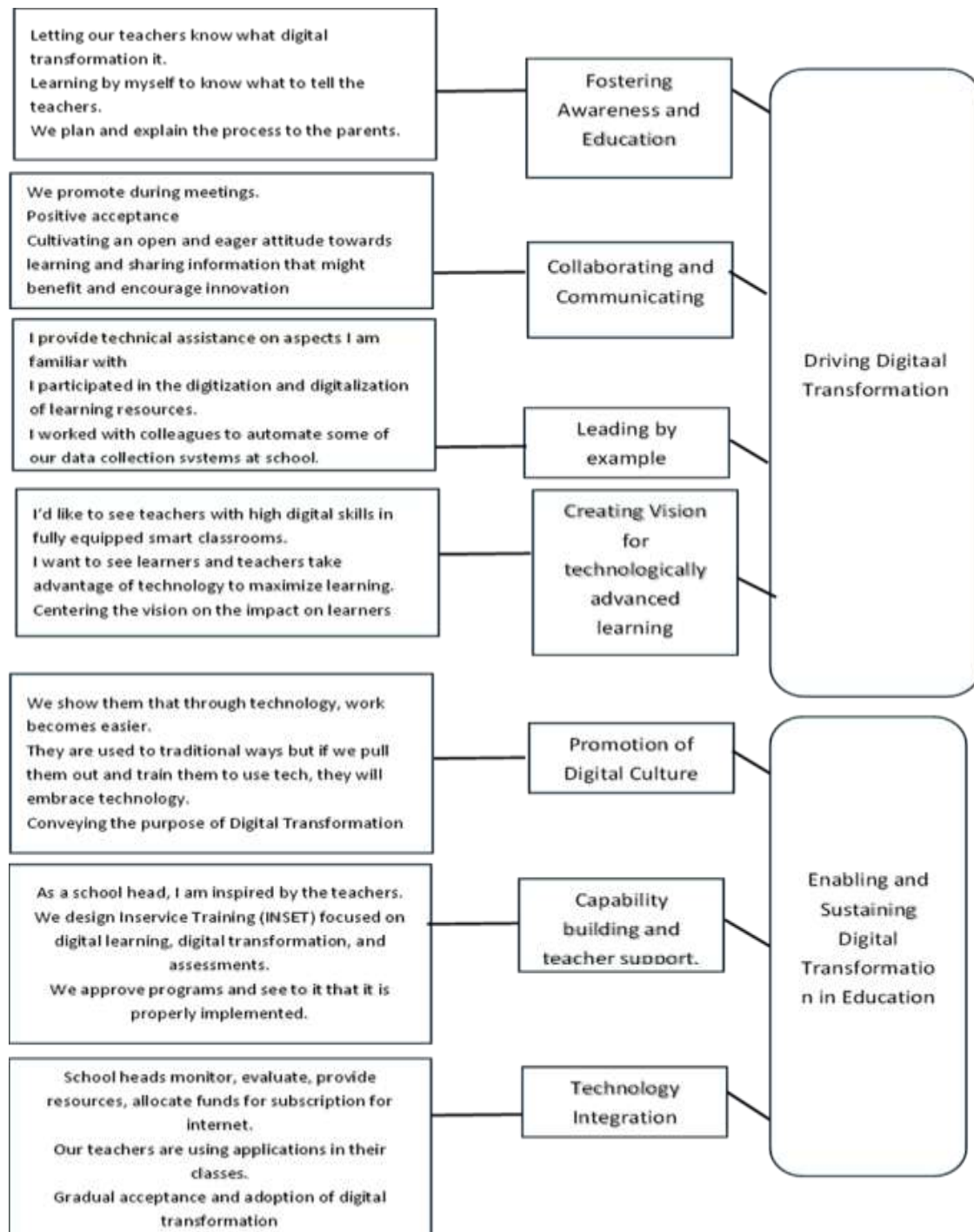


Figure 3. Data Structure: Digital Leadership Practices of Educational Leaders in Leading Digital Transformation Initiatives

technologically advanced learning environments, and emphasize the benefits of digital tools for teachers and students. As one respondent articulated, "I'd like to see teachers with high digital skills teaching in fully equipped smart classrooms," and "I see digital transformation as a means for learners to become more prepared for the real world" (R13). This visionary approach aligns with the findings of a Gallup and Amazon Web Services

(AWS) study from 2022, which highlighted the significant impact of digital skills on economic growth and job satisfaction.

Digital transformational leadership is crucial for advancing digital transformation initiatives. It is therefore imperative that leaders must possess vision, collaboration, flexibility, and a commitment to lifelong learning to synchronize the organization's trajectory with the drivers of digital transformation. Also critical to advancing digital transformation initiatives the emphasis on the importance of digital leadership traits like advocacy, empathy, digital literacy, and flexibility (Sullivan, 2017; Trefler, 2019; Wiyono et al., 2023). Furthermore, it should also underscore the need for strategic leadership, appropriate investment, and stakeholder involvement to achieve successful digital transformation in education (JISC, 2021).

3.2.2. Enabling and Sustaining Digital Transformation in Education

Enabling and sustaining digital transformation in education involves creating a supportive culture, integrating technology, providing continuous professional development, engaging with parents and educators, and addressing resource and connectivity issues. Promoting a digital culture is crucial, as educational leaders must demonstrate how technology can simplify and expedite work. One respondent stated, "We demonstrate to them how technology makes work easier" (R8), reflecting a high degree of digital maturity and openness among educational leaders.

Gradually pushing teachers out of their comfort zones is another strategy. Educational leaders must empower teachers to transition from traditional to modern instructional methods. One respondent explained, "Sanay na sila sa traditional na pamamaraan, but if we pull them out and train them to use technology, eventually they will embrace technology" (R5). This approach emphasizes transparency and the potential benefits of digital transformation, fostering an environment where educators feel motivated to embrace change.

Capability building and teacher support are vital for initiating and sustaining digital transformation. Leadership involvement, open communication, and a collaborative approach are essential. Educational leaders must be committed to enhancing teachers' skills and adapting to changes. One respondent highlighted the importance of ongoing professional development: "We design Inservice Training (INSET) focused on digital learning, digital transformation, pre-test, and post-test" (R12). This commitment to building capability ensures teachers are prepared to deliver quality instruction and embrace digital initiatives.

Technology integration presents several challenges: scheduling, infrastructure, accessibility, and effective execution. Despite these challenges, educational leaders remain optimistic. One respondent mentioned the need for dependable Wi-Fi and ICT-based education, emphasizing the importance of programs and infrastructure (R7, R9). Addressing access disparities is also crucial, as some respondents expressed concern that impoverished students might struggle with digital integration (R4).

Overall, effective digital leadership in education requires a forward-thinking approach, collaboration, adaptability, and a commitment to continuous learning. It also requires vision and strategic implementation (Fuzukawa & Promsri, 2019), and competence in utilizing digital innovation to drive organization change (Deloitte, 2016). By championing digital transformation initiatives and creating a supportive environment for educators, leaders can pave the way for future-ready learning environments.

3.3. Factors that Facilitate the Implementation of Digital Transformation Initiatives in terms of Digital Capability and Digital Culture

Figure 4 illustrates the factors that facilitate the implementation of digital transformation initiatives. These factors are split into two primary domains: Digital Capability and Digital Culture. Digital Capability focuses on developing an environment that supports continuous learning and collaboration. Simultaneously, Digital Culture involves a holistic strategy aimed at fostering innovation and comprehensive digital transformation within the educational ecosystem. This dual approach underscores the necessity of both technological and cultural readiness for successful digital transformation.

3.3.1. Building an Environment for Continuous Learning and Development

Providing a space where teachers and students can collaborate and continuously learn is crucial for digital transformation. This environment is facilitated through continuous upskilling, technical support and networking, and intergenerational support. Continuous upskilling is essential for keeping educators relevant in the rapidly changing digital landscape. This involves workshops, training programs, and online courses designed to help staff members acquire new skills and hone existing ones. Respondents highlighted the importance of "organizing seminars," "ensuring that the teachers are highly qualified," and "orientation" (R5). This dedication to professional growth ensures that educators can effectively engage with new technologies and methodologies.

Furthermore, respondents emphasized that providing professional development training is key to ensuring continual upskilling. One respondent noted the importance of

"giving the teachers professional development training to acquire the required abilities" (R5). This strategy keeps educators updated with the latest technological advancements and fosters an environment of continuous professional growth. Such initiatives empower teachers to adapt to new technologies and work techniques, enhancing their capability to contribute to various specialties and promote cross-functional cooperation.

Moreover, technical support is also vital in ensuring users receive the necessary assistance when encountering technology-related issues. This support can come from help desks, online resources, and dedicated IT professionals. Respondents mentioned that when their division cannot provide support due to distance, they "hunt for opportunities in their areas" (R5). Efficient technical support minimizes downtime and allows educators to focus on their work, promoting continuous learning. The respondents also highlighted their fortune in receiving "technical support from the division office" and noted that "teachers are highly responsive" and "consider the urgency of the problem" (R7, R6). This robust support infrastructure facilitates efficient collaboration and communication.

Lastly, intergenerational support leverages the strengths of both younger and older educators. Younger, more tech-savvy teachers can assist their older counterparts, fostering a collaborative environment. This mutual support promotes knowledge sharing and mutual assistance, as the statement highlights, "assisting older instructors and encouraging younger teachers to support their older counterparts" (R5). Such cooperation enhances the skills of all educators and promotes a culture of Inclusivity and teamwork. School-Based Management (SBM) policies that recognize and encourage these practices further reinforce this supportive environment.

3.3.2. Holistic Approach to Foster Digital Transformation and Innovation

A holistic approach to digital transformation involves comprehensive, organization-wide efforts to create value for the institution and its stakeholders. This strategy entails rethinking business models, operations, and consumer interactions while integrating new technologies. In the educational context, this means embedding technology into every teaching, learning, and administration aspect. The holistic approach is reflected in a comprehensive mindset shift within the education system, embracing a culture that values innovation, adaptability, and continuous improvement.

A comprehensive strategy must include parents in the digital transformation process. Educating parents about digital culture enables them to effectively support their children's education. Respondents noted that involving parents made it easier to achieve digital transformation goals. For instance, one school installed CCTVs in every classroom due to its strong relationship with parents, facilitating easier monitoring and assessment of classes (R7, R8, R6, R12). This involvement ensures that parents are aligned with the school's digital initiatives and can contribute to the overall success of these efforts.

Visionary leadership was also reported to be critical in fostering a comprehensive approach to digital transformation. Leaders must communicate a clear vision for the future, collaborate with other educational institutions, and encourage innovation. As one respondent noted, "During meetings, we present the future of learning in DepEd" (R11), and another emphasized, "We prepare them to see the future" (R2). Visionary leaders play a pivotal role in conveying the purpose and benefits of digital transformation to the entire school community, thereby building a culture of innovation.

Moreover, inclusivity is a fundamental component of a holistic approach to digital transformation. Respondents reported that inclusive practices in implementing digital transformation initiatives lead to more holistic and innovative outcomes. One respondent explained, "Let's not just focus on the teachers; let's include the parents and other stakeholders" (R3). This inclusive approach ensures that all learning community members are involved and can contribute to the digital transformation process. Inclusivity also means acknowledging deficiencies and being open to improvement, as noted by a respondent who stated, "Even if we are not adept at using digital tools, we learn it" (R9).

3.3.3. Holistic Ecosystem for Effective Digital Transformation

A holistic ecosystem that supports digital transformation involves addressing key elements like alignment and direction, infrastructure and connectivity, and adaptability and flexibility. Strategic planning and leadership guidance are crucial for successful digital transformation. Respondents emphasized the need for "bottom-up support" (R6), highlighting the importance of participation from all organizational levels. A robust technology infrastructure, including fast internet connectivity, is essential for effective use of digital technologies. One respondent noted that "lessons will be seamless" (R8) with reliable infrastructure. Adaptability and flexibility are also vital, allowing educators to integrate new technologies successfully. Teachers' willingness to adopt new applications (R9) and recognize the unique needs of each school ensures that digital transformation strategies are tailored to specific requirements.

This holistic approach acknowledges the interdependence of various components and their collective impact on the success of digital transformation projects in education. These insights align with studies by Borowska (2019) and Karakose (2023), emphasizing adaptability and the evolving needs of students in

the digital era, training programs, and online courses designed to help staff members acquire new skills and hone existing ones. Respondents reported the importance of "organizing seminars," "ensuring that the teachers are highly qualified," and "orientation" (R5) so that they can effectively engage with new technologies and methodologies.

Respondents also reported the importance of "giving the teachers professional development training to acquire the required abilities" (R5) to keep educators updated with the latest technological advancements and foster an environment of continuous professional growth. Such initiatives empower teachers to adapt to new technologies and work techniques, enhancing their Technical support is also considered by the respondents as vital in ensuring that users receive the necessary assistance when encountering technology-related issues. This support can come from help desks, online resources, and dedicated IT professionals. Respondents mentioned that when their division cannot provide support due to distance, they "hunt for opportunities in their areas" (R5). Efficient technical support minimizes downtime and allows educators to focus on their work, thereby promoting continuous learning. The respondents also highlighted their fortune in receiving "technical support from the division office" and noted that "teachers are highly responsive" and "consider the urgency of the problem"(R7,R6).

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3.4. Obstacles Faced by the School Heads in Implementing DT Initiatives in terms of Digital Capability and Digital Culture

Various cultural and capability dynamics influence the implementation of digital transformation initiatives in education. These dynamics encapsulate the intricate relationship between cultural elements and an individual's or an institution's capacity to adopt digital technologies. School leaders face numerous obstacles in implementing these initiatives, highlighting the complex interplay between traditional skill boundaries, generational divides, resource limitations, and cultural shifts. Kotter and Heskett (1992) emphasize the need for leaders to recognize and eliminate these obstacles to foster a resilient and flexible atmosphere. However, the challenges are significant, including staff opposition, a lack of digital skills, and insufficient professional development opportunities (Selwyn, 2016; Ertmer et al., 2019).

Resource limitations and connectivity issues are significant barriers to digital transformation. The schools' geographical distribution and students' varying economic backgrounds exacerbate these issues. One respondent highlighted the stark reality: "If the youngster states I do not have a laptop, we can't do anything" (R7). This lack of necessary equipment, like computers, hampers participation in digital learning activities. Additionally, outdated technology from previous government projects remains a hurdle, as noted by another respondent: "Current gadgets are carryovers from Project High Tech" (R4). The overwhelming workload of teachers further complicates the effective execution of digital initiatives, with respondents noting that "teachers are willing to work on instruction but confronting time/workload limits" (R10).

The generational divide presents another obstacle to digital transformation. Younger educators are often more adept at using technology, while older teachers, particularly those nearing retirement, may resist learning new digital skills. One respondent commented on this divide: "One challenge is that we still have teachers who are about to retire and who no longer have the interest to learn how to use technology, making it harder for us to carry out initiatives. We are fortunate to have younger colleagues who can assist" (R4). These dynamic underscores the additional burden placed on younger teachers to bridge the digital proficiency gap.

Distance and overcrowding further hinder the adoption of digital technologies. In rural or remote areas, logistical difficulties and connectivity issues impede access to digital resources. Respondents noted that "distance" and "overcrowded classrooms" create

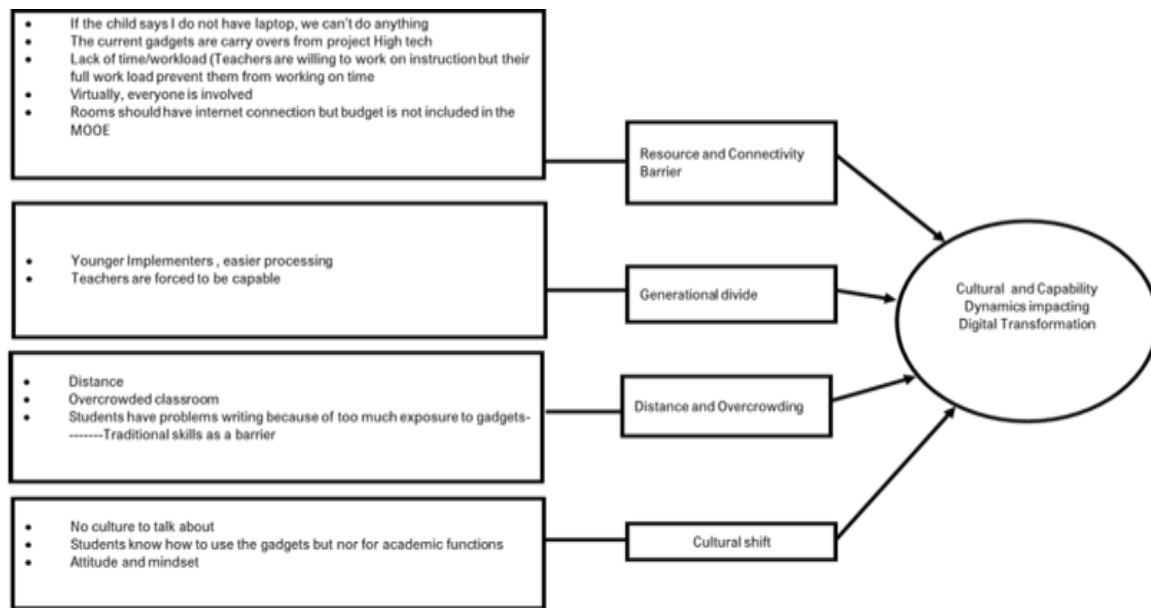


Figure 4. Barriers faced by school heads in implementing DT initiatives

significant barriers to utilizing digital tools effectively. These challenges highlight the need for a robust technical infrastructure to support digital learning. Additionally, cultural shifts are necessary to embrace new forms of communication and learning, moving away from traditional in-person interactions.

Cultural shifts are crucial for the successful integration of digital transformation initiatives. Respondents pointed out that there is "no culture to talk about" when it comes to the use of technology in education (R5, R6). This lack of established customs and norms around digital learning indicates the need for a significant cultural shift to embrace technology's educational potential. Additionally, while students are comfortable with technology, it is often not utilized for academic purposes, highlighting a cultural gap. The assertion that "students know how to utilize gadgets but not for academic functions" (R6) underscores the necessity of bridging this divide to ensure that technology is effectively integrated into formal learning environments.

3.5. Relationship Between Digital Capability, Digital Culture, and Digital Leadership Practices

This convergence shows a concerted attempt to create a setting where educators and students work together to use technology to improve the learning process, hence closing the digital divide. The relationship is further cemented by the implementation and adaptation phase, which demonstrates practical steps like installing apps, easing into the digital shift, and engaging students through social media. The focus on collaboration and communication during meetings supports the qualitative data, suggesting a positive attitude toward learning and readiness to embrace digital transformation.

3.5.1. The Interplay Between Professional Development, Technical Support, and Intergenerational Collaboration Contributes to Building a Sustainable and Adaptive Learning Environment: A Meta Inference

A robust and adaptable educational environment necessitates a harmonious interplay between teachers' ongoing professional growth, robust technology support, and intergenerational cooperation. This holistic approach recognizes the interconnectedness of these elements in building a dynamic and fruitful learning ecology. Professional development programs play a significant role in the development and enhancement of teachers, ensuring they stay current on the latest instructional approaches and technological advancements. This ongoing learning is crucial for creating a dynamic learning environment where educators can effectively engage with new technologies. Additionally, a robust technical infrastructure, including digital networks, hardware, software, and IT support systems, is essential. Technical assistance ensures that digital tools in the classroom are operational and current, allowing educators to adapt to the changing demands of education.

Furthermore, intergenerational cooperation within the educational setting involves collaboration between diverse age groups, such as younger and older generations of educators. This lively exchange fosters a rich and varied learning environment by pairing seasoned teachers with their junior counterparts and encouraging mutual support and knowledge sharing. Integrating technical assistance, professional growth, and intergenerational cooperation promotes the creation of a sustainable learning

environment and enhances flexibility. Flexibility, in this context, denotes the ability to adapt and meet evolving educational demands, while sustainability signifies the power to maintain and persist over time. This meta-inference highlights the importance of these interconnected elements in developing a resilient and adaptive educational ecosystem.

Educators and students should incorporate technology to create the best learning environment possible. This integration focuses on improving student outcomes and the educational process by leveraging contemporary technology's benefits. Creating a learning environment involves physical spaces, instructional techniques, resources, and the overall atmosphere influencing teaching and learning. Utilizing technology as a teaching tool in the classroom is emphasized to enhance learning outcomes. This entails using software, digital tools, online resources, and various technology platforms to support and improve teaching and learning processes. The meta-inference provides evidence of the importance of teachers and students using technology collaboratively and interactively, creating a more engaging, dynamic, and fruitful learning environment that raises the bar for education.

Lastly, emphasizing collaboration, effective communication, and adaptability is essential for digital transformation's successful and long-term implementation. These elements are desirable and necessary to negotiate the difficulties and complexities of the fast-paced digital transformation process. Collaboration and effective communication are core tenets of successful digital transformation, highlighting the importance of joint involvement from numerous stakeholders. This cross-organizational collaboration fosters a shared understanding and encourages synergy. Moreover, adaptability acknowledges the dynamic nature of digital transition and the need to successfully modify plans and tactics to navigate changing conditions and technological advancements. Success in digital transformation requires ongoing effort, flexibility, and a cooperative mentality throughout the process.

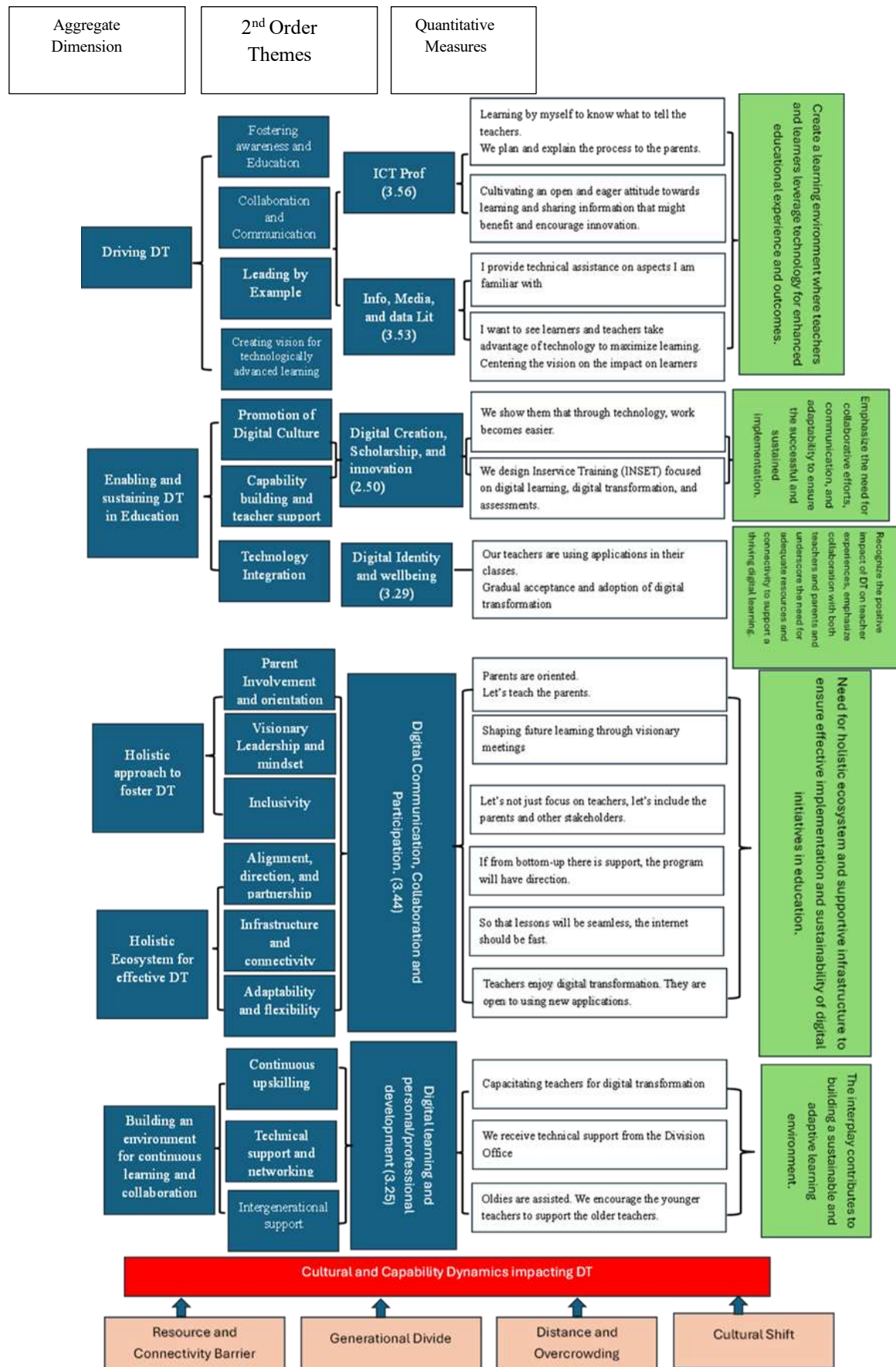




Figure 5. Joint data structure

3.6. Digital Transformational Leadership Model for Educational Leaders

The Digital Transformational Leadership Model for Educational Leaders was developed from the joint data analysis (Figure 6). This is an attempt to capture the digital capability of educational leaders, their digital transformational leadership practices, the factors that facilitated the implementation of DT initiatives, and the obstacles they face when implementing this initiative. As discussed in this study, two separate yet interrelated constructs define the success or failure of digital transformational initiatives. These are the capability (located in the upper portion of the model) and cultural dynamics (bottom part of the model) of the members of the educational organization. It could be seen from Figure 6, therefore, that the model is an intricate and all-encompassing framework created to assist educational leaders in skillfully navigating the complex terrain of digital transformation.

This model emphasizes the alignment of leadership practices with digital proficiency and prioritizes establishing a favorable atmosphere where teachers and students work together to effectively employ technology to improve the learning process, reducing the gap in access to digital resources.

The model also emphasizes the importance of a comprehensive ecosystem and associated infrastructure to guarantee the effective implementation and long-term sustainability of digital initiatives in education. It acknowledges that digital transformation is not an independent endeavor but a dynamic element within a broader interconnected system. This comprehensive viewpoint considers multiple factors like curriculum, technology, teacher training, student engagement, and administration backing. Furthermore, the model highlights the significance of a supportive infrastructure that includes technological, administrative, and organizational frameworks, which play an active role in contributing to the success of digital efforts, and explores the relationship between professional development, technological support, and intergenerational collaboration as crucial factors in creating a sustainable and adaptable learning environment. It also highlights the significance of ongoing professional growth, proficient technology abilities, and collaboration across different age groups to foster a dynamic and fruitful learning environment.

Furthermore, the process highlights teachers' and students' proactive integration of technology to enhance educational experiences and outcomes. It promotes a collaborative and inclusive approach, emphasizing the intentional use of technological tools, platforms, and resources to improve teaching and learning methods. It underlines the necessity of establishing a learning environment that leverages technology to enhance student engagement and productivity.

Moreover, the model highlights the essential elements of collaborative endeavors, efficient communication, and flexibility for the prosperous and enduring execution of digital transformation programs. The declaration acknowledges the importance of collaboration and communication, which involve various stakeholders and aim to establish a collective comprehension of objectives and duties. Furthermore, adaptability is

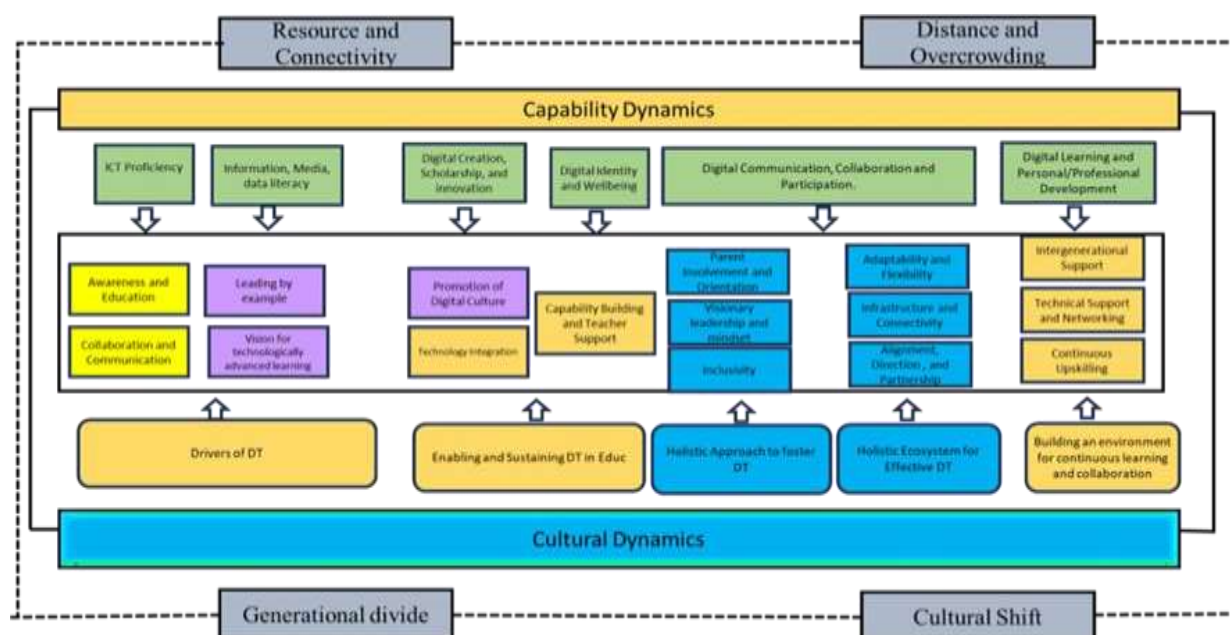


Figure 6. Digital Transformational Leadership Model

emphasized as a vital component in successfully navigating the always-changing landscape of digital transformation.

Lastly, the model recognizes the difficulties and possibilities linked to digital change. Executing strategic planning and efficiently distributing resources is imperative to surmount obstacles such as restricted connectivity and low resource availability. Furthermore, it acknowledges the beneficial influence of the digital revolution on teachers' interactions and emphasizes the necessity for a complete strategy to tackle cultural dynamics and surmount obstacles.

4. CONCLUSION

Considering the findings, the following actionable conclusions are articulated:

1. Educational leaders exhibit a mixed capability level, demonstrating ICT proficiency and digital communication abilities as determined by assessing their current digital capability. There is an apparent lack of proficiency in advanced skills like creation and digital production.
2. Educational leaders have displayed various digital leadership practices, demonstrating their dedication to leading digital transformation. These strategies, ranging from increasing awareness to encouraging teamwork, highlight the diverse approaches necessary for effective implementation. However, the lack of a clear framework for implementing digital transformation initiatives in their respective schools creates a gap in using different technologies and digital pedagogy.
3. Facilitators of digital transformation initiatives point to the value of digital capabilities and culture. Maintaining a positive digital environment and handling technical complexity requires visionary leadership and constant upskilling. By highlighting these elements, attempts to achieve digital transformation are approached holistically.
4. Educational leaders still have many challenges, chiefly related to problems with digital capability and culture. Overcoming these obstacles and cultivating a culture that welcomes digital innovation requires bridging the generational gap and tackling resource limitations.
5. The relationship between digital capability, culture, and leadership practices is synergistic and foundational for digital transformation in education. A supportive digital culture fosters an environment where technology is embraced and integrated into the educational process. Leadership practices are crucial in driving this culture and capability by providing vision, guidance, and support for digital initiatives. These elements create a cohesive framework where educators and students collaborate to leverage technology, enhancing learning outcomes and bridging the digital divide.

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