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Enhancing Digital Transformation Success in Education through Effective Stakeholder Engagement Strategies

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This is to certify that the doctoral study by

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Walden University
2024

Abstract

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Michael Ochieng

MSc Information Technology, Florida Institute of Technology, 2021

BSc Information Technology, Jomo Kenyatta University of Technology, 2004

Research Project Submitted in Partial Fulfillment

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Abstract

Stakeholder engagement strategies have the potential for adverse education business outcomes. Education business leaders are concerned about the impact of ineffective stakeholder engagement strategies on digital transformation initiatives. Grounded in stakeholder theory, the purpose of this qualitative pragmatic inquiry was to identify and explore effective stakeholder engagement strategies that business leaders use to enhance the success of digital transformation in education. The participants were six digital transformation leaders in the western United States. Data were collected using semi-structured interviews and a review of public organizational documents and online archives. Through thematic analysis, three key themes were identified: (a) stakeholder engagement strategies, (b) communication and collaboration, and (c) financial justification and analysis. A key recommendation is for education business leaders to implement personalized engagement strategies incorporating frequent communication, inclusive decision-making processes, and specialized training sessions. The implications for positive social change include the potential for improved educational outcomes through effective digital transformation, enhanced access to educational resources, and reduced educational disparities.

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Dedication

This study is dedicated to my two beloved sons, Michael and Myles, whose unwavering support and love have been my constant source of inspiration. I always feel I have not been present enough in your lives, but I strive to be closer to you. I cherish and love you both and promise to be more available. Now we can play video games more.

To my late father, Joe “Kitt” Opiyo, I finally understood you and will always cherish and love you. To my late mother, Francesca Opiyo, for your endless love and encouragement. You were always there for us and supported us in all our endeavors. I would not be where I am today if I had not lived through your sacrifice and the example you set for us. To my sister, Trizah Opiyo, who left us way too early. I still wish you were here to enjoy the fruits of the results from the support you gave me.

To my siblings Tony, Abich, Maggie, JP, and Maria, as well as my friends, whose camaraderie and support have been invaluable, this journey would not have been possible without each of you. Thank you for believing in me and your unyielding support throughout this endeavor.

To my wife, Connie, I owe endless gratitude. Your love, patience, and unwavering support have been my anchor during challenging times. Your belief in my dreams has given me strength. This journey has been ours together, and we've grown side by side, overcoming every obstacle. I look forward to our future with deep love and appreciation as we reach this milestone. I'm eternally grateful to you.

I LOVE YOU ALL.

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To my cohort, thank you for your camaraderie and support. The shared experiences, collaborative spirit, and mutual encouragement have made this journey both enriching and memorable. I am grateful for the friendships and professional relationships we have built together.

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Section 1: Foundation of the Project

Background of the Problem

Digitalization has transformed industries, including education, offering pathways to transcend traditional barriers, such as the exorbitant costs of textbooks and instructional materials (Haleem et al., 2022). The concept of digital transformation holds the potential to create an educational landscape that transcends borders, enabling universal access to resources irrespective of geographical or economic constraints (Shenkoya & Kim, 2023). However, achieving this is challenging. Technology is appealing, but a lack of stakeholder engagement leads to failures in digital transformation (Dwivedi et al., 2022). According to stakeholder theory (Freeman, 1984), stakeholder participation in decision-making is essential to value generation in a corporation. Based on this knowledge, stakeholders' participation is crucial to the digital transformation of the education industry. Their participation aids success and reduces educational disparities. Fostering stakeholder collaboration and involvement is essential in ensuring digital transformation benefits everyone regardless of location or income.

Escalating expenses associated with textbooks and instructional materials pose substantial obstacles for learners and instructors worldwide. Lindshield and Adhikari (2013) and Oakes and Saunders (2004) attributed the limited availability of learning resources in schools to insufficient funding and an unusually high student-to-resource ratio. The disparity is more evident in developing countries and low-income communities compared to developed countries and privileged communities.

Integrating digital solutions in education has significantly changed how students obtain educational resources. This shift has also underscored the importance of textbooks, instructional materials, and technology in fostering academic growth (Bolton & Emery, 2020). Rapid technological advancements have led to significant changes in study topics and curricula, resulting in a global dependence on digital educational resources (Crittenden et al., 2018). As a result, older content may necessitate updates or substantial revisions. According to Stein et al. (2017), the obsolescence of previous versions due to each update increases expenses associated with acquiring up-to-date learning materials. Digital avenues offer unparalleled access to educational content, but they also present challenges regarding rapid content obsolescence and the economic implications of staying up to date.

The education industry is currently undergoing a digital transformation that has the potential to bring significant advantages to the use of Open Educational Resource (OER) products. The designs of these products provide textbooks and instructional materials in digital formats, making them easily accessible to learners at little or no cost (Griffiths et al., 2022). Despite the potential advantages, numerous organizations encounter difficulties implementing digital transformation when there is a lack of alignment and stakeholder involvement in managing disruptive changes associated with these initiatives (AlNuaimi et al., 2022). In this paper, I explored strategies digital transformation leaders in the western region of the United States use to engage stakeholders toward success of digital transformation initiatives.

Business Problem Focus and Project Purpose

Digital transformation initiatives fail when key stakeholders lack communication and involvement in managing the disruptive change (Blanka et al., 2022; Cortellazzo et al., 2019; Tuukkanen et al., 2022; Zaoui et al., 2019). Cultural issues, lack of involvement of internal customers, poor governance, and unrealistic expectations lead to approximately 80 to 86% failure of digital transformation initiatives among organizations (Majdalawieh & Khan, 2022; Wade & Shan, 2020). The general business problem is that poor stakeholder engagement contributes to the failure of digital transformation initiatives in the education industry. The specific business problem is that some business leaders in the education industry lack effective stakeholder engagement strategies to increase the success rate of digital transformation initiatives. Therefore, the purpose of this qualitative pragmatic inquiry is to identify and explore effective stakeholder engagement strategies that business leaders in the education industry use to increase success of digital transformation initiatives.

The target population for the study was digital transformation leaders and professionals in the education industry in the western United States. I used purposeful sampling to select six digital transformation leaders. Participants possessed at least two years of strategic decision-making experience. Access to these participants was obtained through industry associations and professional networks. Data collection involved semi-structured interviews and analysis of public organizational documents and online archives.

In this study, I examined the impact of the stakeholder theory on creating value and decision-making within organizations. Businesses can prosper by incorporating stakeholders' contributions into their strategies, especially when faced with environmental fluctuations. Through this strategy, companies can explore new opportunities that guarantee endurance and sustained prosperity through robust stakeholder partnerships (Kantrabutra, 2019). Subsequently, in this study, I established an in-depth understanding of the relationship between this conceptual framework and the digital transformation process in the education industry.

Research Question

What effective stakeholder engagement strategies do business leaders in the education industry use to increase the success rate of the digital transformation initiative?

Assumptions and Limitations

Certain assumptions and limitations influence every research study, defining the context and boundaries of investigations.

Assumptions

Assumptions are underlying principles or beliefs widely accepted as true without requiring evidence and serve as the foundation for study. Assumptions refer to fundamental premises or circumstances postulated to be true to establish the relevance and significance of studies (Chigbu, 2019). Freeman et al. (2021) suggested that the stakeholder theory can enhance the applicability of the resource-based view on strategic management. Therefore, I assumed the stakeholder theory was an appropriate and relevant framework for exploring digital transformation in the education industry,

especially in understanding stakeholder engagement. In qualitative research, participants must possess firsthand experience and expertise in their respective fields, which is vital for conducting thorough and well-informed studies (Negrin et al., 2022). In this study, I assumed the participants would provide honest and forthright answers, reflecting their genuine experiences and perspectives. When effectively managed, digital transformation can offer potential benefits and value to the education industry (Hashim et al., 2021). Therefore, I assumed that digital transformation is a positive move for the education industry through stakeholder engagement and the effective use of technology.

Limitations

Limitations refer to constraints and restrictions that impact a study's design, methodology, and analysis. Limitations include inherent shortcomings and external factors that can influence the outcomes of a study, typically lying outside the researcher's sphere of influence (Holleman et al., 2020; Miles, 2019). A narrow geographical scope limits the transferability of the research findings (Deffner et al., 2022). I have focused the study on the Western United States, which may restrict the study's relevance to areas with socio-economic or cultural circumstances.

Qualitative interviews are susceptible to bias, including memory inaccuracies. These memory inaccuracies might distort results (Adams-Quackenbush et al., 2019). I used semi-structured interviews as the primary data collection technique, where the self-reported data were susceptible to biases that affected or limited the validity and reliability of findings. Disregarding unsuccessful or partially successful endeavors in digital transformation could result in overlooking significant insights gained from these

encounters (Nadkarni & Prügl, 2020). However, unsuccessful or partially successful initiatives might have offered additional insights. Finally, the rapid pace of technological advancement was a significant limitation (Verhoef et al., 2021). Research findings may become obsolete quickly due to swift advancements in digital transformation, which are leading to new technologies and strategies.

Transition

In Section 1, I highlighted the pivotal role of digital transformation in the education industry, emphasizing the potential of digital solutions in transcending traditional barriers like excessive textbook costs. In Section 2, I address the significance of stakeholder engagement, grounded in the stakeholder theory, proposing that stakeholder engagement is crucial for the success of digital transformation initiatives. I thoroughly examine the challenges and opportunities presented by digitalization in education, mainly focusing on the high costs and limited availability of learning resources and the disparities in resource access across different regions.

This conceptual framework set the stage for the research methodology in Section 3, where the focus transitioned to pragmatic inquiry, explored as the qualitative methodology chosen to address the research question focused on effective stakeholder engagement strategies. I address the research process, outlining steps and measures to ensure the integrity and relevance of the research. Subsequently, in Section 4, I presented the findings and insights from this research and discussed the implications and potential applications of these insights in the broader context of digital transformation in education.

Section 2: The Literature Review

A Review of the Professional and Academic Literature

Digital transformation has captured the attention of many companies. The increased use of the Internet and trading over e-commerce platforms have led many organizations to adopt technology to reach a broader customer base and improve the efficiency and productivity of their business operations. However, many organizations need help to succeed in digital transformation initiatives when key stakeholders need more alignment and involvement in managing disruptive changes.

In this literature review, I highlighted the significance of stakeholder and strategic management, specifically in digital transformation. I used Freeman's stakeholder theory to advocate for incorporating all stakeholder interests in decision-making processes to generate value collectively. I differentiated between primary and secondary stakeholders, emphasizing the importance of involving both groups to support effective governance and the achievement of digital revolutions. I considered stakeholder empowerment and involvement an essential step in the success of organizational changes in the digital era. I emphasized that the progress of technology, alignment of stakeholder interests, and active participation are necessary to achieve practical digital projects.

I methodically analyzed the intricacies of stakeholder management in digital transformation. I began by examining the fundamental principles of the stakeholder theory and then analyzed stakeholder categorization. I also explored stakeholder engagement and empowerment. Finally, I synthesized research findings to advocate for a comprehensive approach incorporating technological and organizational advancements.

Keywords for this literature review were *adaptive learning*, *digital transformation*, *stakeholder engagement*, *strategies*, *education system*, *digital textbooks*, *internet in education*, *educational technology*, *online education resources*, *self-directed learning*, and *open universities*. Databases were Education Source, Emerald Insight, Elsevier, IEEE Xplore Digital Library, ProQuest One Academic, Taylor and Francis Online, SAGE Journals, and ScienceDirect. I reviewed 72 scholarly sources, of which 69 (96%) were peer-reviewed, two (3%) were non-peer-reviewed, and one (1%) was a book. 62 (86%) were published between 2019 and 2024, while 10 (14%) were published before 2019. In the review, I covered the conceptual framework of the stakeholder theory, the benefits and challenges affecting digital transformation adoption in teaching and learning, and the strategies for implementing effective digital transformation in education.

Table 1

Summary of Literature Review Articles

Article type	<= 5 years	> 5 years	Total	%<= 5 years	% > 5 years	Grand Total %
Book		1	1	0%	100%	1%
Non-peer reviewed journal	2		2	100%	0%	3%
Peer-reviewed journal	60	9	69	87%	13%	96%
Grand Total	62	10	72	86%	14%	100%

Note. Table 1 summarizes the literature review articles by type and age.

Conceptual Framework

The concept of stakeholder management has been widely discussed in strategic management. The stakeholder theory by Freeman (1984) emphasizes the importance of considering the interests of all stakeholders in decision-making processes, which is the

concept that grounded this study. Bridoux and Stoelhorst (2016) proposed a behavioral approach to contributions to joint value creation, suggesting that stakeholders are more likely to contribute to collective value creation when their interests align with the organization. Stocker et al. (2020) built upon this by providing a classification model for stakeholder engagement in sustainability reporting, which can help firms identify and prioritize their stakeholders and tailor their reporting accordingly. The significance of strategic, ethical, and relational elements in managing stakeholder relationships is crucial. It is essential to acknowledge the necessity of continuous involvement, communication, and harmonization of various interests to achieve effective stakeholder management. Organizations can build strong relationships and create shared value by engaging with stakeholders and considering their interests and perspectives.

The logical connections between the framework presented and the nature of this study included digital transformation as a business strategy that affects and influences all stakeholders. This strategic move brings significant changes in business operations, affecting and influencing all the stakeholders while creating value (Jafari-Sadeghi et al., 2021; Nambisan et al., 2017). Managing these positive or negative outcomes ensures successful digital transformation alignment of business goals and involvement of stakeholders. The stakeholder theory aligned best with the stakeholders' multi-level actions critical for the success of the digital transformation strategy in creating and accelerating a new digital path to value creation and maintaining their engagement and commitment to the organization.

Stakeholder Theory

Collaboration among organizations with their stakeholders is widely recognized as a determinant factor for digital transformation. Digital transformation effectiveness increases when multistakeholder collaboration, critical alliances, and partnerships are established between stakeholders and organizations (Barrane et al., 2020; Brunetti et al., 2020; Frishammar et al., 2019). The stakeholder theory infers that an organization creates value by considering the stakeholders' inputs in decision-making processes (Freeman, 1984; Goranova & Ryan, 2021). Hence, the value creation from the relationships between organizations and stakeholders enables organizations to deliver on their promises and meet objectives.

Stakeholders are classified as either primary or secondary. Primary stakeholders are integral to the organization’s existence and survival, while secondary stakeholders are those who influence, affect, or are influenced or affected by organizations and are not involved in transactions (Clarkson, 1995). The primary stakeholder group comprises customers, suppliers, employees, investors, and shareholders, while the media, associations, nongovernmental organizations, government agencies, local communities, and the government form the secondary stakeholder group. Clarkson argued that a company fails when one group of primary stakeholders is included in the decision-making process, while secondary stakeholders can positively or negatively influence the public and the organization's performance. However, Stocker et al. (2020) provided a framework that leverages stakeholder engagement for managers to engage the stakeholders at different levels. Therefore, stakeholder engagement of primary and

secondary stakeholders at any level contributes to overall business decision-making processes that benefit communities and environments.

The stakeholder theory encompasses stakeholder empowerment and engagement in value creation. The willingness of stakeholders to cooperate in value creation depends on their commitment and alignment with organizational goals (Freeman et al., 2021; Strand & Freeman, 2013). Stakeholder empowerment and engagement are critical success factors for digital transformation because the involvement of stakeholders in decision-making processes accelerates the value creation process (Strand & Freeman, 2013) and maintains their commitment to engage with organizations (Tuukkanen et al., 2022; Verhoef et al., 2021). Organizations and stakeholders collaborate consistently to create shared and purposeful value. Digital technology will increase understanding of the ecosystem and regional innovations on how digital transformation shapes value creation and the impact of stakeholders on the initiative's success.

Nevertheless, further research must explore how companies and policymakers align the initial conditions and target stakeholder groups to formulate digital strategies. Through the scholarly literature review on stakeholder theory, researchers emphasized the significance of stakeholder engagement in decision-making. However, the process is still in the ideation stage, and conceptual gaps exist in identifying organizational stakeholders.

In this literature review, I explored the stakeholder theory to determine the importance of stakeholders in the success of the digital transformation initiative. Stakeholder empowerment and engagement are critical success factors in organizational

change. The stakeholder theory applied to the digital transformation process implies that the stakeholders make the technological decisions and are for the stakeholders. Organizations need to place digital transformation leaders with the skills to engage stakeholders. The leader must understand that the initiative's success lies with the committed stakeholders, not technology change.

Benefits of Stakeholder Engagement During Digital Transformation

Engaging Stakeholders in Digital Transformation Beyond Technology Change

Digital transformation in education is a multifaceted and systematic shift impacting every educational institution. This transformation entails not only the incorporation of new technologies but also a fundamental reconsideration of the educational methodology to equip students for a digitalized society (Haleem et al., 2022; Mhlongo et al., 2023). Education industry leaders must ensure that the integration of digital technology is in line with educational objectives and effectively enriches the learning experience (Okoye et al., 2022). Education stakeholders, comprising educators, administrators, students, and parents, must comprehend the significance of transitioning to digital learning. Their active involvement and endorsement ensure a seamless and prosperous transition. Therefore, digital transformation in education is a comprehensive process that necessitates a cooperative endeavor to reconsider educational techniques, adopt technology improvements, and actively include all stakeholders to improve the quality and significance of education in the digital era.

Importance of Stakeholder Engagement in the Digital Transformation of the Education Industry

Stakeholder engagement is essential in managing change, leading, and strategizing during the digital transformation of the education sector. Jiang (2020) emphasized the significance of change management in reducing resistance in the education sector, where long-standing customs are firmly established. Iivari et al. (2020) established the pivotal significance of leadership in stakeholder engagement, while McCarthy et al. (2023) stressed the need for a clear direction in the digital transformation journey that matches new technology with educational goals and stakeholder demands, highlighting its strategic nature. The strategy for stakeholder engagement necessitates thoroughly comprehending the educational ecosystem, guaranteeing flexibility, adaptability, and response to the ever-changing technological advancements and stakeholder requirements. Integrating education stakeholders into the digital transformation process helps to synchronize interests with institutional objectives, leading to more seamless transitions and enhanced results. Engaging stakeholders is critical for successful change management, effective leadership, and strategic planning. It ensures that the digital transformation in education aligns with the technological, cultural, and contextual needs and expectations of all players in the educational industry.

Advocating for Digital Transformation in Education Through Effective Stakeholder Engagement

Adopting digital transformation in the educational industry is significantly enhanced by involving multiple stakeholders, such as parents, teachers, and the community. Stakeholder engagement in educational policy and planning expedites implementation and guarantees that the plans are based on practical requirements and

anticipations (Popov et al., 2021). Engaging stakeholders in the digital transformation process in education promotes responsibility and ownership among all parties involved, increasing the likelihood of a successful outcome (De Freitas Langrafe et al., 2020; McCarthy et al., 2023). For educational leaders and school boards, stakeholder engagement is more than just a step in advocating the use of technology in education. It is essential to guarantee the successful implementation, widespread endorsement, and long-term viability of digital learning programs.

Stakeholder-driven Innovation in Educational Technology

Successful digital transformation in education necessitates a collective effort and proactive involvement from diverse stakeholders. Incorporating this approach, education leaders guarantee that digital resources and instructional plans are customized to align with educational objectives and cater to various learning requirements (Gkrimpizi et al., 2023; Habib, 2023). Higher education institutions have successfully achieved digital transformation by implementing adaptive learning technologies, online course delivery, and digital administrative operations (Alenezi & Akour, 2023; Chugh et al., 2023). Therefore, the distinct difficulties and possibilities posed by digital transformation in education can be efficiently recognized and tackled through stakeholder collaboration. In embracing the combined efforts in the digital transformation process, education leaders can develop a more inclusive, accessible, and high-quality educational environment. The leaders can narrow the gap between those who have access to digital technology and those who do not while providing learners with the essential skills needed in the modern era of technology.

Successful Technology Adoption Through Stakeholder Engagement

Deep engagement of stakeholders can lead to a sense of ownership, which is crucial for enhanced user acceptance of new technologies and techniques in the educational domain. Engaging stakeholders from different groups, including educators, students, and policymakers, is essential for successfully adopting technology, regardless of the project delivery approach (A. Nguyen et al., 2022; Okoye et al., 2022). Meaningfully involving stakeholders guarantees that their viewpoints and requirements are incorporated into the adoption process (Timotheou et al., 2022). Education leaders who embrace this strategy acknowledge potential difficulties and synchronize technological improvements with the genuine requirements of the educational system. When involved in decision-making, stakeholders are more inclined to adopt and utilize new technologies and approaches. Hence, for the educational sector to effectively address the difficulties of digital transformation and technological integration, it is crucial to give high importance to all relevant stakeholders' comprehensive and inclusive involvement. Digital transformation leaders who adopt this approach guarantee that higher authorities do not just determine technical progress but are accepted and adopted by all educational community members.

Challenges Affecting Digital Transformation Adoption in the Education Industry

Stakeholder Engagement Challenges in User-Centric Adaptive Learning Systems

The evolution of adaptive learning systems requires a comprehensive approach that involves various stakeholders, navigates specific challenges, and prioritizes the learner's experience. Alajlani et al. (2023) highlighted the crucial role that policymakers,

educators, students, parents, and industry partners play in ensuring the success of these systems. Meanwhile, Mirata et al. (2020) identified the problems of integrating adaptive learning in higher education, such as faculty development, curriculum design, and student motivation. As Vesin et al. (2018) demonstrated, a user-centric design approach may significantly improve learning experiences, reaffirming the need to adapt material to individual learners' needs and preferences. These findings illustrate the significance of broad stakeholder participation, overcoming specific hurdles, and learner-centric design in the growth of adaptive learning systems. These key characteristics will indeed define the development and implementation of successful adaptive learning systems as we look to the future of education.

Stakeholder Inclusion in the Digital Transformation of Higher Education

The significance of digital transformation in higher education is becoming increasingly apparent, especially in unusual or challenging circumstances. Fernández et al. (2023) provided an extensive overview, detailing digital initiatives across institutions and underscoring challenges and triumphs. Habib (2023) further illuminated the crucial role of digital tools in societies affected by conflict, showcasing them as more than mere strategic assets but as essential educational lifelines. Complementing these perspectives, Hashim et al. (2021) emphasized the need for a holistic approach to digital transformation, prioritizing strategic planning, stakeholder engagement, and thorough assessment. These studies indicate that the success of digital transformation is not just dependent on technical uptake. Instead, it calls for a broader understanding of educational evolution incorporating international trends and regional difficulties. The shift towards

digital transformation in higher education has emerged as an essential response to diverse challenges and evolving societal needs. As such, institutions must engage their stakeholders in navigating the future with an understanding of these varied lessons, ensuring their plans are comprehensive, context-aware, and focused on developing inclusive and engaging learning opportunities.

Equitable Access and Resource Management to Digital Technologies

Integrating environmental education with digital transformation in higher education is a complex endeavor that encounters numerous obstacles. Babalola and Olawuyi (2021) discovered notable challenges in integrating environmental education for sustainable development inside Nigerian higher education. Trevisan et al. (2023) recognized the promise of digital tools in promoting sustainability but also noted challenges related to equitable access and resource management. Furthermore, Uygur et al. (2020) emphasized the role of educational leadership in successfully integrating technology for sustainable and inclusive education, suggesting that effective leadership is critical in guiding the adoption of technology in ways that support inclusive and sustainable educational practices. These difficulties encompass resource constraints, inadequate curriculum, and insufficient faculty training, emphasizing the necessity for comprehensive approaches that successfully tackle these structural obstacles to include environmental sustainability in educational frameworks. Therefore, leadership is crucial in implementing technology that promotes inclusivity and sustainability in educational methods.

Strategies for Implementing Effective Digital Transformation in Education

Integrating Stakeholder Perspectives in Comprehensive Digital Transformation.

Successful digital transformation in education centers depends on various critical factors. Morrison et al. (2019) underlined the importance of a well-defined and efficient procurement process for educational technology products, highlighting how the complex interplay of decision-making within school districts, vendor relationships, and the perceived value of the technology can influence the procurement process. Tang et al. (2021) added to this by emphasizing the significance of open educational practices in enhancing the acceptance of digital resources among K-12 teachers. However, while adopting and integrating digital tools are essential for digital transformation, Walker et al. (2022) reminded us of the potential privacy risks associated with compulsory technology adoption, which need comprehensive strategies that facilitate technology integration and protect student privacy. Stakeholder engagement strategies are instrumental in achieving these objectives, ensuring that all parties involved in the education process are considered, their needs addressed, and their roles recognized in driving the success of the digital transformation.

Stakeholder-centric Approaches to Training and Support for AI and Technology.

The successful implementation of artificial intelligence (AI) and technology in school education requires a comprehensive approach that addresses ethical implications, practical challenges, and the diverse experiences of all stakeholders. Akgün and Greenhow (2021) advocated for an ethical framework that promotes responsible AI use and digital citizenship when institutions consider AI implementation in K-12 education,

highlighting concerns about privacy, data security, potential biases in AI algorithms, and educational equity. While investigating the many problems stakeholders experience when incorporating technology into classrooms, Chew et al. (2018) promoted solutions that include improved training programs, increased technical support, and policies that ensure equitable access to technology. Deepa et al. (2022) revealed the gap between policy, practice, and user experience, emphasizing the importance of considering these perspectives for a successful transition. It is essential to ensure that technology benefits all learners without compromising ethical standards or excluding voices, particularly marginalized or disadvantaged students, to ensure educational technology contributes positively to their learning experience. The effective integration of AI and technology in education relies on a well-rounded strategy that upholds ethical principles, addresses practical obstacles directly, and connects policy with user experience, all while promoting diversity and fairness.

Stakeholder Perceptions and the Effectiveness of Educational Technology

Current research emphasizes the intricate nature of using educational technology (EdTech) in higher education, emphasizing the impact of human attitudes and the necessity for context-specific strategies. Granić (2022) concluded that accepting EdTech is influenced by individual attitudes, beliefs, and circumstances. Therefore, a personalized approach is recommended instead of a one-size-fits-all solution. Similarly, Tang et al. (2021) discovered that instructors' acceptance of Open Educational Resources (OER) depends on their perception of the advantages, usability, and social expectations. Nevertheless, Mhlongo et al. (2023) emphasized the necessity for continuous research to

accommodate the ever-changing technology and higher education landscape, guaranteeing sustained advancement in this field. Engaging stakeholders is essential for tailoring tactics to institutional contexts and ensuring robust decision-making for the sustainable integration of EdTech. These valuable observations are essential for helping institutions and policymakers successfully incorporate technology into education.

Stakeholder Synergy for Sustainable Digital Transformation in Education

These education stakeholders must develop and enforce successful, fair, and encompassing technology-driven educational practices and regulations. Trevisan et al. (2023) emphasized the need for precise concepts and robust techniques in conversations around digital transformation, emphasizing the need for collaboration among education stakeholders. Veckalne and Tambovceva (2022) enhanced the story by emphasizing the importance of digital transformation as a strategic means to promote educational sustainability, calling for well-implemented initiatives that enhance and maintain educational processes. In their study, Wang et al. (2023) specifically examined critical elements such as technological progress, preparedness of institutions, and necessary digital skills that are crucial for the process of digital transformation in the field of education. The common thread across this research demonstrates that digital transformation is not merely a standalone technology advancement but a crucial approach for attaining sustainability and fostering creativity in the educational realm. An intentional, meticulously designed, and institutionally endorsed strategy for digital transformation is crucial for establishing sustainability, enhancing education delivery, and remaining responsive to the needs of an increasingly digital world.

The Role of Stakeholder Vision in the Digital Transformation of Education

Integrating technological innovations, specifically those provided by EdTech start-ups and artificial intelligence, within the educational sector is a multifaceted process laden with unique challenges. According to Mattsson and Andersson (2019), integrating business models with the demands of the public education system and fostering successful private-public interactions are critical for EdTech start-ups. McCarthy et al. (2023) emphasized that leadership vision, enough resources, professional development, and a change-oriented culture are critical to encouraging digital transformation in education. In addition, integrating AI into education requires a solid technological infrastructure, data privacy measures, a competent workforce, and adaptive business models (Renz & Hilbig, 2020). These studies emphasized the significance of taking a holistic, systemic approach to harness the potential of technological innovation in the educational sector. Successful technology integration in education relies on stakeholder collaboration, comprehensive teacher support for technology use, and innovative strategies tailored to the available resources. Educational policy and practice must consider these key factors to successfully leverage technology in learning environments.

Engaging Multiple Stakeholders in the Evolution of Educational Technologies

Efficient incorporation of technology in education requires a comprehensive strategy that emphasizes cooperation, teacher assistance, and inventive methods while working within limited resources. The "Golden Triangle" framework proposed by Cukurova et al. (2018) emphasized the importance of fostering strong collaboration among developers, researchers, and educators to achieve effective adoption of evidence-

based educational technology (EdTech). Ley et al. (2021) underscored the substantial impact of education stakeholders' attitudes, experiences, and professional development on the practical implementation of EdTech in classrooms. Developing successful online teaching methods requires the critical ability to innovate, particularly in contexts where resources are restricted (Lufungulo et al., 2023). The "Golden Triangle" paradigm and its associated research emphasize that integrating technology in education goes beyond the technology itself. It involves establishing an ecosystem where instructors are adequately educated and supported to utilize these tools effectively. Educators, policymakers, and EdTech developers must consider these observations as they strive to improve the quality and efficacy of technology-enhanced learning. Incorporating these characteristics into educational policies and procedures is imperative to use technology in learning environments effectively.

Stakeholder Strategies for Bridging the Digital Divide in Education.

The paramount importance of digital literacy in today's educational landscape has been unequivocally established, aligning with the rapidly advancing technological world. Technology integration in teaching methodologies, the urgency to bridge the digital skills divide, and the necessity of digital literacy in community school settings have all demonstrated positive implications for student engagement and outcomes (L. Cheng et al., 2018; Jackman et al., 2021; Statti & Torres, 2020). L. Cheng et al. discovered that the flipped classroom technique yields substantial enhancements in student learning results compared to conventional approaches. In contrast, Jackman et al. highlighted the increasing importance of digital skills in education and the job market. Additionally,

Statti and Torres provided evidence of the beneficial effects of incorporating technology into local educational institutions, including learning outcomes and increasing student engagement. This collective research emphasized students' need to understand and effectively use digital tools for success in the 21st century. Hence, educational institutions must adapt and guarantee that students possess a high level of competence in digital literacy. Education policymakers and stakeholders should consistently evaluate and prioritize the significance of digital literacy in order to prepare upcoming generations for a technologically advanced society.

Leadership as a Stakeholder Strategy for Inclusive Ed-Tech Implementations

EdTech plays a crucial role in enhancing learning environments, but its effectiveness relies on stakeholders comprehending its potential benefits and limitations. Research conducted by Lurvink and Pitchford (2023) in Sierra Leone and Schumann et al. (2019) in higher education settings emphasized the varied influence of educational technology (EdTech). Although Sierra Leone welcomes it, there are ongoing questions regarding the accessibility and sustainability of the matter. EdTech in higher education promotes stakeholder engagement, hence improving the educational experience. Uygur et al. (2020) emphasized the importance of educational leadership in promoting technology integration to create inclusive and sustainable learning environments. Leaders with a profound comprehension of technology's possibilities can effectively facilitate its incorporation, specifically emphasizing inclusiveness and sustainability. Leadership plays a crucial role in effectively incorporating technology into different educational environments, considering the community's specific requirements, and promoting

collaboration among all involved parties to achieve prosperous, inclusive, and long-lasting educational technology implementations.

Stakeholder Roles in Cultivating Long-Term Viability of Educational Technologies.

The advancement of educational technology necessitates a comprehensive approach that combines overarching, long-term plans with targeted, contextually appropriate measures. Research emphasizes the need for scalability and long-term sustainability in educational technology (Niederhauser et al., 2018). It is essential to adjust educational practices to the digital era and consider the obstacles faced in various educational environments, such as rural areas (Tan et al., 2021; Wargo et al., 2020). The efficacy of educational technology (EdTech) is contingent upon achieving a harmonious equilibrium between comprehensive strategies and tailored adjustments to individual learning environments and cultural contexts. The successful implementation of educational technology in different settings relies on integrating overarching concepts and specialized techniques tailored to the context. This requires educational stakeholders to adopt a proactive approach, prioritizing the durability and flexibility of technology integration in various learning settings, ranging from urban to rural areas.

Stakeholder Collaboration Strategies for Integrating Generative AI in Education.

Generative AI can significantly enhance the educational experience through personalized learning, innovative instructional methods, and alternative assessment models. Bozkurt and Sharma (2023) emphasized the importance of crafting precise and unbiased prompts for eliciting clear, relevant, and unbiased responses from AI, emphasizing the need for proficiency in prompt engineering. Kadaruddin (2023)

illuminated Generative AI's ability to boost creativity and critical thinking, making it a valuable tool for customized instruction and evaluation. Meanwhile, Chan (2023) addressed concerns over AI misuse and proposed a comprehensive AI Ecological Education Policy Framework to mitigate associated risks. For successful and ethical AI integration, strategic planning, collaboration among educators, policymakers, and AI developers, and addressing ethical issues like data privacy and bias are essential. Stakeholders in education should consider these findings foundational for AI integration into instructional and administrative practices. Thereby helping mitigate risks and fully leveraging AI's potential to improve global educational settings.

Stakeholder Engagement in Fostering OER Culture in the Education Industry.

Open Educational Resources (OER) play an essential role in higher education. OER in higher education offers significant benefits, including accessibility, inclusivity, and customizable learning materials, which are crucial for educational equity and flexibility (Van Allen & Katz, 2020). However, the effective adoption and use of OER face challenges. These include educators' lack of awareness and understanding about OER's potential, 'dark reuse' issues (Baas et al., 2019), practical constraints like time limitations, and a lack of skills among educators (Menzli et al., 2022). The research proposed a comprehensive approach to promoting the adoption of OER, which includes raising awareness through campaigns, providing targeted support, implementing skill training programs for education stakeholders, and cultivating an institutional culture that supports OER. Implementing these tactics, backed by continuous research, is crucial for

surmounting obstacles to adoption and optimizing the capacity of OER to establish a more comprehensive and readily available educational setting.

Stakeholder Strategies for Ed-Tech Standards Adoption

While welcomed, integrating technology in the U.S. K-12 education system has encountered various challenges. Chatterji (2018) highlighted the minimal productivity improvements despite significant technological investments, attributing this to the complexities in education. Crompton and Sykora (2021) responded by developing technology standards for educators, emphasizing the necessity for clear, practical tech adoption guidelines. However, unforeseen challenges, such as those seen during the pandemic's shift to remote teaching (Reynolds et al., 2022), have highlighted student disparities. These insights collectively stress the need for strategic planning, ongoing research, and flexibility in incorporating technology into education. Despite significant investment in technology, educational stakeholders still differ in satisfaction levels, indicating that technology alone is not a universal solution. For EdTech to fully achieve its potential, it is essential to synchronize technology with efficient instructional techniques and resolve any technology use and contentment deficiencies.

Strategies for Evidence-Based Design and Adaptive Learning in Modern Education

Within contemporary education, the importance of educational technology (EdTech) is growing, requiring the use of evidence-based design and adaptable learning methods. Kucirkova et al. (2023) emphasized the need to utilize data-driven assessment and design in EdTech by introducing their EdTech Data Evaluation Routine (EVER). Nicolai et al. (2023) emphasized the importance of comprehending the practicality of

EdTech in various educational settings impacted by the COVID-19 pandemic. Their stance is to promote ongoing research and strategic advancement to improve the integration of EdTech on a worldwide scale. In addition, Singh et al. (2021) supported using a blended learning approach, which integrates both online and traditional classroom approaches. This strategy is recommended for the creation of dynamic and resilient learning environments. Therefore, the significance of stakeholders' cooperative endeavors, continuous enhancement, and a well-rounded approach to diverse learning methods are critical in enabling EdTech to enhance educational results effectively.

Transition

In the literature review, I used the stakeholder theory to address the digital transformation of education, highlighting the strategic, ethical, and relational factors involved in managing primary stakeholders, such as customers, suppliers, and employees, as well as secondary stakeholders, including media, NGOs, and government agencies. The efficient involvement of stakeholders is essential for addressing the intricacies of digital transformation, harmonizing new technology with educational objectives, and fostering inclusive learning environments. Engaging stakeholders in the transformation process helps address obstacles such as ensuring fair and equal access, effectively managing resources, and providing adequate training for faculty. Engaging stakeholders also facilitates artificial intelligence and technology that prioritizes diversity, equity, and responsible use in education.

Effective collaboration among education stakeholders with digital literacy and leadership skills is crucial for technology’s long-term and equitable incorporation.

Ultimately, achieving a prosperous digital revolution in education requires the harmonious collaboration of all involved parties, meticulous strategic planning, ethical deliberations, and ongoing adjustment to technological environments to improve education delivery.

In Section 3, I address the research project, describing its design and methodology. In Section 4, I present findings and conclusions from the research.

Section 3: Research Project Methodology

In this section, I outline stringent measures and protocols to ensure the ethical protection and confidentiality of all participants and organizations. I detail strategies for anonymizing personal information, describe secure data storage procedures in place, and specify the five-year duration for secure data retention. These steps demonstrated my commitment to upholding the highest standards of integrity and respect in my research.

Project Ethics

I was the primary data collection instrument in this research project. Researchers facilitate communication, ethically gather data, and adapt to changing contexts (Austin & Sutton, 2014; Elo et al., 2014; Hesse et al., 2018). They engage directly in interviews, observe nuances, and ensure ethical standards like informed consent and confidentiality (Dunwoodie et al., 2022; Surmiak, 2019; Tamminen et al., 2021). They interpret cultural and social contexts, ensuring data quality and reliability through triangulation and member checking (Stahl & King, 2020). This active and reflective role required balancing objectivity with a deep understanding of the participants and setting and acknowledging and mitigating personal biases. My dynamic engagement was crucial for uncovering insights that drive digital transformation success in educational settings.

The primary researcher actively ensures respect for people by obtaining informed consent and fully informing participants about the study's nature, purpose, and rights, including the right to withdraw (Ho et al., 2023; Tamminen et al., 2021). According to the Belmont Report (Protections, 2022), the researcher's role involves a rigorous risk-benefit analysis to uphold the principle of beneficence, aiming to minimize potential

harm and maximize benefits. Additionally, the researcher is dedicated to the principle of justice, ensuring fair participant selection and equitable distribution of the research benefits, particularly protecting vulnerable populations.

In practicing these ethical principles, I continuously reflected on and adjusted my methods to maintain the highest standard of ethical conduct. I protected participant confidentiality and adhered to institutional and legal guidelines. By upholding respect, beneficence, and justice, my research contributes valuable insights about effective stakeholder engagement strategies in digital transformation and exemplifies the integrity and care essential for ethical scholarly inquiry in education.

I acknowledged my potential relationships with the topic, participants, and research area, understanding they might shape the study's dynamics. The researchers' professional and academic experiences in education and digital transformation provide them with a deep understanding of the subject, yet they must also stay vigilant against biases (Florczak, 2021; Jamieson et al., 2023; Stahl & King, 2020). My existing connections with participants, possibly through previous digital transformation initiatives, could have influenced their responses and my interpretation. Similarly, my familiarity with the research setting possibly offered valuable insights and predisposed me to certain expectations.

I critically reflected on these relationships to ensure they enhanced the research's depth without compromising objectivity. By employing reflexivity and peer debriefing strategies, I aimed to balance my insider knowledge with critical and unbiased perspectives. Ultimately, my awareness of these relationships and commitment to rigor

and transparency contributed to the study's integrity and validity of findings on effective stakeholder engagement strategies in digital transformation.

I used the informed consent process. Klykken (2021) found that the informed consent process in qualitative research evolves throughout the research rather than being a one-time agreement. Xu et al. (2020) reported that researchers emphasized the importance of disclosing information to participants yet experienced challenges in implementing dynamic, informed consent procedures while experiencing varied understanding and support from institutional stakeholders. I developed and refined consent forms that clearly articulated the study's aims, methodologies, and potential impacts, prioritizing clarity and accessibility. As I interacted with participants, I addressed their inquiries and ensured their understanding and voluntary involvement, securing documented consent. This process reflected my dedication to respect, autonomy, and informed participation.

I was committed to ensuring that all participants were fully aware of their right to withdraw from the research at any time and for any reason. Participant withdrawal procedures in qualitative serve the essential purposes of (a) respect for autonomy, (b) ethical considerations, (c) data integrity, and (d) transparency (Barrow, 2022; Potthoff et al., 2023; Stahl & King, 2020). This was communicated clearly and early, both verbally and within the informed consent document. I used a straightforward and respectful withdrawal process, offering various contact methods for participants to express their decision. Importantly, I emphasized that no explanation was required for withdrawal, though I remained open and receptive to any feedback participants wished to provide.

This approach fostered a trusting and respectful environment, ensuring participants felt valued and empowered throughout their involvement. In managing participant withdrawals, I handled all data with confidentiality and respect for individual preferences, whether that involved removing or retaining their data. Each withdrawal was meticulously documented, noting dates and methods to maintain study transparency and integrity. By establishing these procedures, I upheld the highest standards of research integrity, prioritizing participants' autonomy and well-being. I adhered to ethical research practices and reinforced my work's credibility and trustworthiness, ultimately contributing to a successful and respectful study on digital transformation in education.

As I moved forward with my research project, I was committed to offering participants a unique incentive that reflected the scholarly and collaborative nature of the work: a comprehensive summary of the study's findings. Incentives are designed to provide participants with valuable insights regarding research outcomes, demonstrating how their contributions have significantly impacted the study (Abdelazeem et al., 2022; Haesebrouck et al., 2021; Parkinson et al., 2019). I ensured summaries were not only detailed and informative but also accessible and practical, offering real value to participants. This method was central to my research approach, emphasizing reciprocal and respectful relationships between myself and the participants.

The ethical safeguarding of participants in qualitative research is essential to guarantee the welfare and honesty of individuals engaged in the study (Taquette & Da Matta Souza, 2022; White, 2020; Whitney & Evered, 2022). A qualitative study can adversely affect several aspects of a person's physical, psychological, moral,

intellectual, social, and cultural well-being at any stage, either as a direct consequence or afterward (Tremblay et al., 2021). As I embarked on my research study, my foremost commitment was to the ethical protection of all participants, guided by a carefully structured plan. I began this process by securing informed consent, thoroughly explaining the study's purposes, methods, and potential risks or benefits, and obtaining written agreement from participants. Maintaining strict confidentiality was paramount; I anonymized data where possible and securely stored all sensitive information. Recognizing the importance of minimizing potential discomfort or harm, I rigorously assessed all research activities, adjusting them to prioritize participant safety and comfort. Additionally, I emphasized participants' right to withdraw at any moment, ensuring this process was straightforward and communicated.

Ensuring the confidentiality of all individuals and organizations involved in qualitative research is crucial for upholding ethical norms and fostering trust (Bos, 2020; Dougherty, 2021; Wa-Mbaleka, 2019). According to Heaton (2021), researchers frequently use pseudonyms to conceal participants and individuals, organizations, and locations referenced in interviews and other textual data gathered for research. In all research documentation, I systematically replaced real names with pseudonyms to protect their identities, effectively anonymizing the data. This measure helped prevent personal or organizational information from being publicly associated with the study. Additionally, I enforced strict data storage protocols, where all research material, both physical and digital, is securely locked or encrypted. Access to this sensitive information is strictly controlled, with a detailed log maintained to track who has accessed the data

and ensure high security and accountability. Furthermore, I committed to storing anonymized research data securely for five years, enforcing my dedication to upholding the confidentiality and trust of participants well beyond the study's conclusion. transformation.

Nature of the Project

I used the qualitative research method and a pragmatic inquiry design, acknowledging their appropriateness for the intricate topic of stakeholder involvement in digital transformation. The three research methods are qualitative, quantitative, and mixed (Saunders et al., 2016). Qualitative research allows a researcher to explore and provide deeper insight into observed invisible patterns gathered from participants' experiences, perceptions, and behaviors (Aspers & Corte, 2019; Busetto et al., 2020; Saunders et al., 2016). In contrast, quantitative research creates statistical data to test a theory while examining the relationships between variables (Busetto et al., 2020; Saunders et al., 2016). Mixed methods research combines the qualitative and quantitative approaches within the same study rather than limiting the analysis to one approach (Busetto et al., 2020; Saunders et al., 2016). Using qualitative research, I negotiated the ever-changing nature of educational technology, enabling me to adjust my focus as new insights arose. Through direct engagement with participants using open-ended questions in semi-structured interviews, I collected comprehensive data that precisely represented the complex aspects of the digital revolution in education.

I considered three research designs to use for this qualitative doctoral study on stakeholder engagement strategies: (a) ethnography, (b) case study, and (c) pragmatic

inquiry. Ethnography involves the researcher immersing themselves into the participants' environment and using various data collection techniques to exhaustively account for the social phenomena during the research period (Busetto et al., 2020; Saunders et al., 2016). Ethnography will not be suitable for this research due to the lengthy time involved in collecting data. Business researchers use grounded theory to develop theoretical explanations that explore various business and management issues (Saunders et al., 2016). The case study approach extensively explores complex cases within a context of time and place (Priya, 2020; Yin, 2018). The case study approach is appropriate to keep the study focused and manageable within the limited time and lack of enormous resources for large-scale research. However, the partnership agreements may take too long to receive from the companies, prolonging the duration to complete the study.

Pragmatic inquiry design employs the principles of pragmatism and adaptability to generate practical knowledge that can be applied to real-world problems by adapting qualitative procedures to suit the specific requirements of each study (Barker & Pistrang, 2021; Kelly & Cordeiro, 2020; Ramanadhan et al., 2021). The pragmatic inquiry design prioritizes developing efficient solutions customized to circumstances, guaranteeing my research remained firmly rooted in practicality and directly tackled the obstacles and possibilities of digital transformation in educational environments. This design aligned with my goal to explore the conceptual aspects of stakeholder engagement and provided practical strategies that may be implemented. The primary objective was to enhance the efficacy of digital transformation initiatives in educational establishments.

Population, Sampling, and Participants

In this study, I included people actively engaged in digital transformation within their industries, such as educational instructors, IT professionals, and policymakers. The participant population and eligibility criteria in qualitative pragmatic inquiry research are crucial for delineating the scope of the study, assuring its relevance, preserving methodological equilibrium, and sustaining ethical norms (Kaushik & Walsh, 2019; Kelly & Cordeiro, 2020; Ramanadhan et al., 2021). Eligibility was contingent upon active participation in digital initiatives, at least two years of experience, willingness to engage, and meeting age and consent requirements. This method encompassed various viewpoints and experiences essential for comprehending digital transformation and formulating ways to engage stakeholders.

Engaging participants required a combination of networking, direct recruitment, outreach through social media, obtaining informed consent, and establishing trust. Networking involves professional connections and snowball sampling (Heckathorn & Cameron, 2017; Kozłowski et al., 2021). Direct recruiting entails contacting potential participants via email or phone (Amri et al., 2021; Negrin et al., 2022). In contrast, social media platforms and online forums expand the pool of potential participants (Oudat et al., 2023; Sledzieski et al., 2023). During these procedures, there was a strong focus on obtaining informed permission, addressing ethical concerns, and building trust and rapport.

Developing successful relationships with participants was accomplished by using transparent communication, demonstrating respect, fostering rapport, engaging in active

listening, displaying adaptability, providing regular updates, offering feedback, upholding ethical behavior, and expressing gratitude. Lloyd et al. (2017) suggested that developing such partnerships necessitates adopting a "relational approach" to designing trials and interventions, which involves formulating the research question, evaluating designs, and maintaining this collaborative approach throughout the research process. These tactics guaranteed participants a sense of worth and admiration, creating a favorable atmosphere for sincere and fruitful relationships. Establishing a favorable team atmosphere and cultivating connections in analysis fostered cooperation and recognized the interdependence of participants' experiences, making a substantial contribution to the study's achievement.

I used purposeful sampling to effectively identify individuals with high expertise. Purposeful sampling is a method that chooses specific situations that include much valuable information in order to gain a deep understanding and valuable insights rather than generalizing based on empirical evidence (Cash et al., 2022; Ramanadhan et al., 2021; Shaheen et al., 2019). Using this method, I selected participants who provided rich, detailed, and varied insights into stakeholder engagement strategies, ensuring that the data collected were directly relevant to the study's objectives. Additionally, snowball sampling was optional as the study advanced. The initial number of participants was determined to be between 6 and 8, using the notion of theoretical saturation. However, I was prepared to adjust this number as the research progressed, either increasing it to ensure a comprehensive understanding of all aspects of the topic or stopping early if saturation was reached sooner.

Data saturation is crucial for the validity of qualitative research. Data saturation is an essential concept in qualitative research that guarantees the thoroughness and reliability of the study (Hennink & Kaiser, 2022; Mpofu, 2020; Rahimi & Khatooni, 2024). Braun and Clarke (2019) state that data saturation describes the moment in data collection where no additional information or themes are identified. I ensured saturation by continuously analyzing data from interviews, observations, and documents throughout the data collection process. When new information continued to emerge, I recruited additional participants until no new themes or insights were observed. I used methodological triangulation to collect data through various interviews and document analysis to cross-verify information and themes to assist in this process. Additionally, I engaged in ongoing discussions with my peers to reflect on the data and determine if saturation has been achieved.

Data Collection Activities

Semi-structured interviews are a valuable tool for gathering data in research, as they incorporate both structured and unstructured components. This approach frequently involves pre-established inquiries or subjects while allowing interviewers to explore particular areas in greater depth in response to the interviewee's answers (Bearman, 2019; DeJonckheere & Vaughn, 2019; Knott et al., 2022). Semi-structured interviews enable researchers to collect more nuanced and thorough information than completely structured interviews. This strategy facilitated qualitative data gathering, providing valuable insights into the respondents' viewpoints, encounters, and driving forces. Semi-structured interviews served as the primary tool for gathering data, and they were particularly

advantageous for me since they allowed me to effectively adjust and react to the interviewee's responses in real-time. Semi-structured interviews are a beneficial method that allows researchers to actively interact with their participants while keeping a certain level of organization to ensure the data acquired is consistent and reliable.

I aligned the interview protocol with the research question, ensuring that the questions asked were relevant and directed toward achieving the study's goals. The semi-structured interviews were open-ended questions that allowed for in-depth responses (Bearman, 2019; DeJonckheere & Vaughn, 2019; Knott et al., 2022). The questions were designed to be informed and relevant to the topic, allowing for flexibility. I developed a system for organizing and managing data as the interview progressed, including allocating unique identifiers to responses and noting down key points or themes that emerged during the interview. Using the interview protocol, I ensured that the data collected was relevant, organized, insightful, and directly contributed to the research objectives.

To carry out the semi-structured interview with maximum efficiency, I began by clearly stating the fundamental goals of the interview and precisely defining the essential themes and subjects that the interview sought to investigate. This established the orientation for the nature of inquiries and guaranteed that the interview concentrated on the research objectives. I compiled a manual consisting of a combination of organized and open-ended inquiries. Roberts and Rosanne (2020) emphasized the importance of having a set of predefined questions to cover important themes during research. However,

they also highlighted the need for the researcher to be open to asking spontaneous follow-up questions depending on the respondent's answers.

This adaptability allows researchers to investigate the topic deeper and collect more subtle and detailed information (Bearman, 2019; Dunwoodie et al., 2022; Knott et al., 2022). I actively listened to and carefully examined the comments provided during the interview. Additionally, I recorded the conversation to ensure accuracy and took detailed notes. I diligently observed spoken reactions and non-verbal signals, which offered additional insight into the topic. Following the interview, I correlated the findings with the research objectives. I examined the gathered data to discern recurring patterns, topics, and valuable observations about the primary research inquiry.

To improve the dependability and accuracy of a data collection instrument or process, I commenced by establishing a clear definition of the research objectives. Comprehending the study's objective helped formulate a data collection procedure that precisely collected the required information while staying pertinent to the research objectives. When conducting qualitative research, researchers must field-test the data collection instruments to detect and correct any ambiguities or biases (Bearman, 2019; DeJonckheere & Vaughn, 2019; Roberts & Rosanne, 2020). Member checking and transcript review are crucial for ensuring the consistency and accuracy of data in qualitative research, enabling researchers to validate their findings with the participants, thereby enhancing the credibility and reliability of the research (McKim, 2019; Rowlands, 2021; Stahl & King, 2020). I established protocols to verify the coherence and precision of the data obtained using member verification and transcript inspection.

Ultimately, I consistently assessed and modified the techniques to guarantee that the gathered data stayed pertinent and dependable in connection to the study inquiry. This stage involved continuously monitoring the data collection process and making necessary adjustments based on feedback and initial analysis.

Interview Questions

Please provide an overview of your background, experience, and role in leading digital transformation efforts within your organization.

1. How have you helped drive the adoption and implementation of modern technology and processes?
2. Who are the main stakeholders of the organization?
3. What strategies did you use to engage the stakeholders?
4. What critical topics of interest did you engage with each set of stakeholders?
5. What communication channels did you use to engage each set of stakeholders?
6. What type of activities did you engage with the stakeholders?
7. How did you ensure the stakeholders aligned with the company's vision?
8. What was the frequency of the interaction with the stakeholders?
9. What additional information about stakeholder engagement strategies would you like to share?

Data Organization and Analysis Techniques

Data organization and analysis techniques facilitate the researcher in structuring, documenting, and contemplating the research process and findings. Research logs are comprehensive documentation of the research procedure, encompassing the locations

and subjects investigated and the discoveries derived from these investigations (Liu et al., 2023; Page et al., 2021; Tenny, 2022). I used research logs to monitor advancement, oversee data, and prevent redundant work. This system facilitates researchers in conducting a thorough and meticulous analysis of their work by offering a systematic approach to evaluate the research process and outcomes. The data and insights gathered and analyzed in this system are then connected to the overarching research goals. This aided in maintaining the research's focus and alignment with its original objectives, thus boosting the quality and relevance of the findings.

Qualitative data analysis is an iterative process researchers use to investigate the data more profoundly and enhance their understanding of it. Thematic analysis, as described by Braun and Clarke (2006), is a method of analyzing qualitative data that entails identifying, analyzing, and interpreting patterns of meaning, also known as themes. Thematic analysis frequently entails iteratively moving between steps as new insights emerge (Byrne, 2022; Dawadi, 2020; Morgan & Nica, 2020). I used thematic analysis to analyze the data collected for this study. I followed a logical and sequential process to conduct a thematic analysis for my research design using Atlas.ti software for coding and mind-mapping. Through this iterative process, a researcher can understand the data and provide a structured way to present the findings.

The process involved: -

1. Data Familiarization: I thoroughly engaged with the raw data by repeatedly reviewing and analyzing it while taking note of initial insights.

2. Generating Initial Codes: I used Atlas.ti software to systematically assign meaningful codes to the dataset, arrange the data into categories, and identify recurring trends.
3. Conducting Theme Search: I compiled codes into possible themes and collected any pertinent data for each potential theme.
4. Evaluating Themes: I assessed the effectiveness of themes about the coded extracts and the complete data set. This process entailed two stages: first, evaluating individual themes for consistency, and second, assessing the relevance of these themes in the context of the entire dataset.
5. Elucidating and Designating Themes: I enhanced the details of each subject and created unambiguous definitions and titles for each theme.
6. Generating the Report: I established a connection between the analysis, the research topic, and the literature while offering compelling illustrations.
7. Mind-Mapping: I used Atlas.ti's mind-mapping features to arrange and link concepts visually, thus improving my comprehension of their interconnections.
8. Reflection: I critically analyzed the process of thematic analysis, considering any potential biases, limits, and the consequences of my results.

Please be aware that all raw data gathered throughout this investigation will be safely archived for five years. This aligns with my dedication to safeguarding and maintaining the integrity and privacy of data. The data will be stored in a highly secure and encrypted format, ensuring only authorized persons can access it. The data will be securely disposed of after five years. I prioritize data security and maintain the utmost

data protection standards. The active involvement of participants in this research was highly valued, and I want to reassure everyone that their information is securely protected.

Reliability and Validity

Reliability

Reliability pertains to data consistency across time and under comparable circumstances, ensuring the research's findings remain stable and may be reproduced in a similar setting. Researchers employ many procedures, such as audit trails, member checking, pilot testing, and transcript review, to verify the dependability of their research (Forero et al., 2018; Nowell et al., 2017; Stahl & King, 2020). Member checking and transcript review involve direct engagement with participants to ensure the proper capturing of their opinions. I used the field tests to ascertain whether the questions were being misinterpreted, necessitating modifications that enhanced the clarity and efficacy. In addition, I used the pilot tests to validate the efficacy of the data-gathering methods and the suitability of the proposed analysis procedures for the type of data being collected. I consistently kept audit trails to enhance methodological rigor, facilitating a thorough understanding of the process by which results were derived. By implementing these tactics, I enhanced the reliability and value of my findings, bolstering the legitimacy of my research for the education industry community and stakeholders.

Validity

Qualitative research validity refers to the quality and reliability of research findings in qualitative studies. Validity is established by verifying the credibility,

transferability, and confirmability of the research findings (Ancker et al., 2021; Forero et al., 2018; Stahl & King, 2020). Qualitative research validity is contingent upon subjective factors and centers around the legitimacy and precision of the interpretations conducted by researchers. I used respondent validation, a technique in qualitative research, to bolster the validity of my initial findings by subjecting them to testing with participants. This approach guaranteed that the results accurately represent the experiences and viewpoints of the participants.

Credibility

The primary concept of credibility in qualitative research is to ensure that the research findings accurately represent the reality of the subjects examined. Triangulation, member checking, and extensive contextual information are employed to bolster the trustworthiness of the findings (Campbell et al., 2018; Johnson et al., 2020; Stahl & King, 2020). I used member-checking and triangulation techniques to ensure data saturation in my research. I meticulously designed and executed my study, carefully considering the aspects of validity, reliability, and relevance to create credibility.

Transferability

Transferability, in the realm of qualitative research, refers to the evaluation of the extent to which the findings of a study can be applied to different situations or settings. Researchers establish transferability by providing extensive and detailed accounts of their research settings and participants, enabling other researchers and readers to ascertain the applicability of the findings to diverse settings or groups (Korstjens & Moser, 2017; Stahl & King, 2020; Younas et al., 2023). Transferability does not include the discovery of

generally applicable truths but rather the comprehension of how findings can be pertinent in comparable circumstances. By providing comprehensive details, I allowed others to compare the research context with prospective new situations and evaluate the relevance of the findings. The transferability of my research findings will enable academics and practitioners to apply them in diverse contexts, increasing the usefulness and influence of the research.

Confirmability

Confirmability in qualitative research guarantees that the findings accurately represent the subjects and are not influenced by the researcher's biases or preferences. Confirmability is established by meticulously documenting the methodology and conducting transparent data analysis. This ensures that the data and interpretations of the study accurately reflect the experiences and perspectives of the participants (Johnson et al., 2020; Nowell et al., 2017; Stahl & King, 2020). I used meticulous methodological documentation and transparent data analysis procedures to recognize and address my biases, thereby reducing my impact on the gathering and interpretation of data. My neutrality was vital in ensuring that the study's conclusions were based only on data and not influenced by prior ideas or theories. Confirmability enhanced the credibility of my research by guaranteeing that the results were a precise and impartial portrayal of the viewpoints of the research participants rather than a manifestation of my personal biases or intents.

Data Saturation

I achieved data saturation by continuously collecting and analyzing qualitative data to understand stakeholder engagement in the digital transformation of education. Data saturation refers to the point in data collection where no additional information or themes are identified (Braun & Clarke, 2019; Daher, 2023; Mwita, 2022). I identified recurring themes, patterns, and insights through semi-structured interviews, observations, and document analysis. Through this iterative process, I refined my interview questions and focus areas, ensuring alignment with the study's objectives and the evolving digital transformation landscape in education. I will reach data saturation when no new themes emerge, indicating comprehensive coverage of stakeholder involvement. This structured approach enabled me to navigate the complexities of qualitative research effectively, providing valuable insights into stakeholder involvement in the education industry's digital transformation.

Transition and Summary

In Section 3, I outlined rigorous, strict ethical and confidentiality measures for participants and organizations. I stressed informed consent, data transparency, and participant rights. I understood the potential influence of my interactions with participants and used critical thinking to maintain objectivity. I also stressed my commitment to informing participants of their right to withdraw at any time.

Additionally, I handled all collected data with care and respect for individual wishes. I identified incentives to encourage individuals to provide valuable research ideas. I also discussed using qualitative research methodology, pragmatic inquiry design,

and semi-structured interviews to study educational stakeholders' participation in digital transformation. Lastly, I stressed the importance of keeping research logs to ensure my research's trustworthiness, credibility, transferability, and confirmability.

In Section 4, I present findings from my rigorous analysis and interpretations. These findings clarify the research issues and objectives I aimed to investigate. Subsequently, I analyze how this study enhanced the business domain, emphasizing the practical application of the knowledge acquired to gain a competitive edge in professional settings. Following this, I explore the implications of my research on social change, highlighting possible societal consequences and advantages. Ultimately, acknowledging that each study presents fresh opportunities for investigation, I offer suggestions for further research in this field. This thorough methodology guaranteed a comprehensive understanding of the consequences of my research, encompassing its practical applications in the business sector and its broader societal implications.

Section 4: Findings and Conclusions

Presentation of the Findings

The purpose of this qualitative pragmatic inquiry was to identify and explore effective stakeholder engagement strategies that business leaders in the education industry use to increase the success of digital transformation initiatives. The overarching research question was: What effective stakeholder engagement strategies do business leaders in the education industry use to increase the success rate of the digital transformation initiative? In this study, I revealed that effective stakeholder engagement strategies are crucial for the success of digital transformation in educational institutions.

Through detailed analysis and participant interviews, several key themes emerged, including the necessity of involving local teams. These strategic tactics are tailored to diverse stakeholder groups, managing resistance, engaging vendor partners, valuing stakeholder contributions, and developing a comprehensive engagement framework. Additionally, I highlighted the critical importance of robust communication channels and collaborative strategies to ensure alignment and commitment among stakeholders. Financial justification, including return on investment (ROI) and cost of goods sold (COGS) analysis, was also emphasized as essential for demonstrating financial viability and securing stakeholder support for digital projects.

Key strategies identified include tailored communication and regular updates, participatory decision-making, and targeted training sessions to address the unique needs and motivations of different stakeholder groups. The importance of early and continuous involvement of stakeholders, including local teams, vendor partners, and other key

stakeholders, was emphasized to ensure alignment with organizational goals and reduce resistance. The findings highlight the significance of a comprehensive stakeholder engagement framework that fosters collaboration, values stakeholder contributions, and maintains open lines of communication. These strategies align with the stakeholder theory: stakeholder participation is essential for value generation and successful organizational change.

I focused on digital transformation leaders in the western United States and used a qualitative pragmatic inquiry approach to gather data. Data collection involved semi-structured interviews with digital transformation leaders with at least two years of strategic decision-making experience. Six participants were selected using purposeful sampling, and data were gathered through interviews and analysis of public organizational documents and online archives. This approach ensured a comprehensive understanding of stakeholder engagement strategies used in digital transformation initiatives. I assigned pseudonyms P1, P2, P3, P4, P5, and P6 to participants to protect identities.

Data were analyzed using Braun and Clarke's thematic analysis method and ATLAS.ti to identify recurring themes and patterns. This iterative process involved familiarizing myself with data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing a report. The analysis emphasized understanding strategies, challenges, and stakeholder engagement outcomes in digital transformation within educational settings. I generated 279 initial codes; however, only 217 were applied to the study. I categorized the 217 codes as (a) addressing stakeholder

resistance, (b) communication methods, (c) stakeholder engagement strategies, and (d) stakeholder identification.

Table 2

Code and Participant Distribution Table

Codes	P1	P2	P3	P4	P5	P6	Totals
Addressing Stakeholder Resistance	6	5	7	6	7	4	35
Communication Methods	11	6	12	9	9	4	51
Stakeholder Engagement Strategies	17	7	13	10	9	11	67
Stakeholder Identification	13	7	13	10	11	10	64
Totals	47	25	45	35	36	29	217

Note. Table 2 shows the code distribution among the participants.

After coding, data were organized into broader themes. Codes were examined for patterns, and similar codes were grouped to form initial themes. These initial themes were then reviewed and refined to ensure they accurately represented data. This step involved checking if the themes worked with the coded extracts and the entire data set. Themes were split, combined, or discarded as necessary to ensure they were coherent and distinct. The essence of each theme was captured, and clear definitions and names were assigned. Each theme was defined in terms of its scope and focus. Finally, the themes were written up in the report. This involved providing detailed descriptions of each theme, supported by quotes and data extracts. Themes were presented in a coherent narrative that explained their relevance and contribution to the research objectives. The derived themes were (a) stakeholder engagement strategies, (b) communication and collaboration, and (c) financial justification and analysis.

Table 3

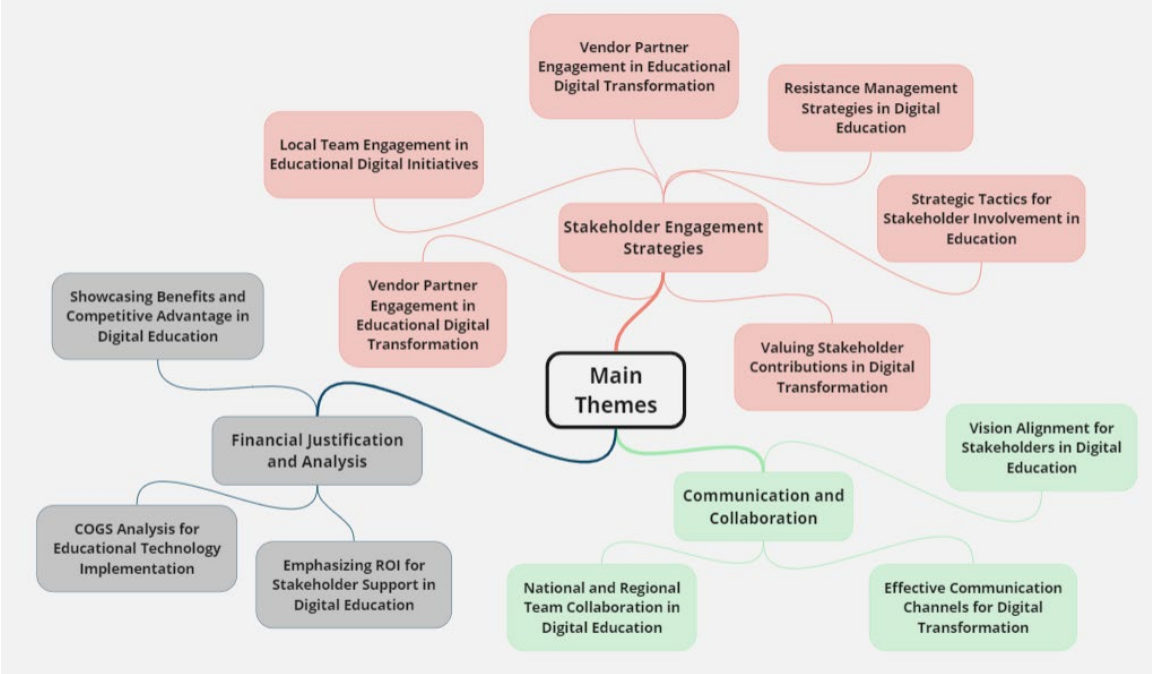
Code and Theme Distribution Table

Themes/Codes	Addressing Stakeholder Resistance	Communication Methods	Stakeholder Engagement Strategies	Stakeholder Identification
Communication and Collaboration	8	22	20	13
Effective Communication Channels for Digital Transformation	4	17	9	7
National and Regional Team Collaboration in Digital Education	2	2	2	2
Vision Alignment for Stakeholders in Digital Education	2	3	9	4
Stakeholder Engagement Strategies	32	28	53	60
Comprehensive Stakeholder Engagement Framework for Digital Education	1	7	15	27
Local Team Engagement in Educational Digital Initiatives	5	4	3	4
Resistance Management Strategies in Digital Education	3		4	1
Strategic Tactics for Stakeholder Involvement in Education	13	8	13	18
Valuing Stakeholder Contributions in Digital Transformation	8	6	16	8
Vendor Partner Engagement in Educational Digital Transformation	2	3	2	2
Financial Justification and Analysis	4	3	8	3
COGS Analysis for Educational Technology Implementation		1	5	
Emphasizing ROI for Stakeholder Support in Digital Education	1	1	2	
Showcasing Benefits and Competitive Advantage in Digital Education	3	1	1	3

Note. Table 3 shows the code distribution within the themes and subthemes.

Figure 1

Mind Map of Main Themes



Theme 1: Stakeholder Engagement Strategies

Stakeholder engagement strategies are crucial in successfully implementing digital transformation in educational institutions. According to P5 and P6, addressing the unique demands and motives of different stakeholder groups requires multiple engagement strategies. Furthermore, all participants noted that strategic collaboration and continuous communication through various channels, such as regular meetings and digital platforms, were critical for maintaining alignment and addressing concerns promptly. Early involvement and ongoing communication are vital to reducing resistance and fostering a collaborative environment. An all-encompassing framework for engagement that incorporates unambiguous communication and feedback systems

guarantees proactive involvement and dedication, thereby making substantial contributions to the prosperity and durability of digital projects.

The main theme of stakeholder engagement strategies encapsulates a comprehensive approach to involving all relevant stakeholders, ensuring their contributions are valued, and effectively managing resistance. The following subthemes emerged from the main theme: (a) local team engagement in educational digital initiatives, (b) strategic tactics for stakeholder involvement in education, (c) resistance management strategies in digital education, (d) vendor partner engagement in educational digital transformation, (e) valuing stakeholder contributions in digital transformation, (f) comprehensive stakeholder engagement framework for digital education. These themes elucidated specific strategies and tactics leaders use to enhance stakeholder engagement and increase the success rate of digital transformation initiatives.

Table 4

Stakeholder Engagement Strategies Theme and Subthemes

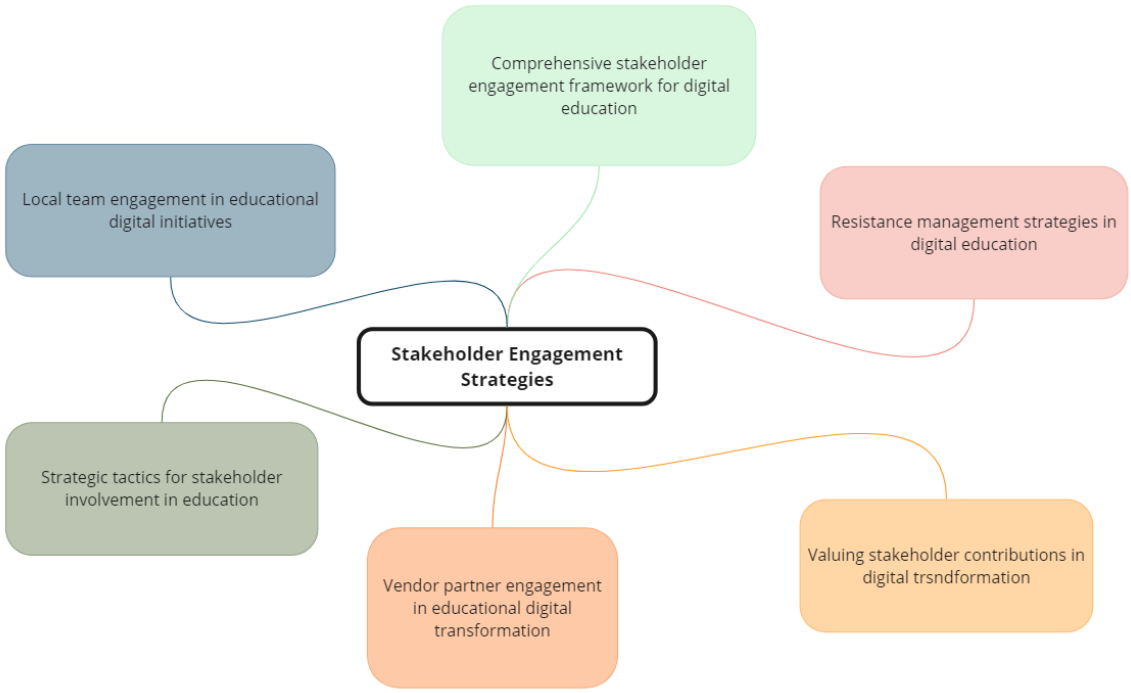
Themes/Codes	Addressing Stakeholder Resistance	Communication Methods	Stakeholder Engagement Strategies	Stakeholder Identification
Stakeholder Engagement Strategies	**32**	**28**	**53**	**60**
Comprehensive Stakeholder Engagement Framework for Digital Education	1	7	15	27
Local Team Engagement in Educational Digital Initiatives	5	4	3	4

Resistance Management Strategies in Digital Education	3		4	1
Strategic Tactics for Stakeholder Involvement in Education	13	8	13	18
Valuing Stakeholder Contributions in Digital Transformation	8	6	16	8
Vendor Partner Engagement in Educational Digital Transformation	2	3	2	2

Note. Table 4 shows the theme of stakeholder engagement strategies with the emerging subthemes.

Figure 2

Mind Map of Stakeholder Engagement Strategies



Local Team Engagement in Educational Digital Initiatives

Effective engagement necessitates the proactive participation of educators, IT personnel, and administrative staff in the strategizing and implementation stages. The absence of involvement from crucial stakeholders, such as local teams, frequently leads to failures (Lansing et al., 2023). This assertion is reinforced by the stakeholder theory, which posits that value creation necessitates the involvement and contribution of all stakeholders (Freeman, 1984). Participant interviews further underscore the importance of engaging local teams. P4 (personal communication, May 10, 2024) highlighted that understanding what drives stakeholders and aligning those drivers with organizational goals enhances productivity and engagement. The strategic involvement of local teams ensures that technological advancements align with educational goals, enhancing the relevance and effectiveness of digital initiatives. Additionally, collaboration and empowerment emphasized by the stakeholder theory are directly applied through the active participation of local teams, promoting a collaborative environment essential for success. Thus, engaging local teams aligns with stakeholder theory and addresses practical challenges, ensuring higher success rates and more effective implementation of educational technology.

Strategic Tactics for Stakeholder Involvement in Education

Creating and implementing strategic tactics tailored to different stakeholder groups enhances their involvement in the digital transformation process. These tactics include regular updates, participatory decision-making, and targeted training sessions that align with stakeholders' interests and needs (Hoblos et al., 2023; Martínez-Peláez et al.,

2023). P4 (personal communication, May 10, 2024) noted, "You can't treat every stakeholder the same, right? But you know, for me, everything has to be very well outlined so that they have clear directions, and they understand what it is that is expected of them for the delivery". This sentiment underscores the necessity of tailored communication and engagement strategies to ensure stakeholder alignment and productivity.

The need for tailored stakeholder engagement strategies aligns with existing literature emphasizing the importance of customized communication and involvement in successful digital transformations. Studies have shown that stakeholder engagement is enhanced when their unique needs and motivations are considered, leading to higher participation and support for digital initiatives (Laugaland et al., 2023; Talwar et al., 2023). Regular updates and participatory decision-making foster a sense of ownership and commitment among stakeholders, reducing resistance and increasing the likelihood of successful implementation. Stakeholder theory posits that addressing the diverse needs and interests of stakeholders is critical for organizational success (Freeman, 1984). The participant's insights on the need for clear direction and understanding of expectations directly tie into these theoretical underpinnings, demonstrating how these tactics can be applied to manage resistance and enhance stakeholder engagement in digital transformation projects.

Resistance Management Strategies in Digital Education

Leaders identify potential sources of resistance, understand stakeholders' motivations, and implement tailored approaches to mitigate concerns and foster

acceptance. A crucial aspect of addressing stakeholder resistance is understanding and responding to stakeholders' needs and motivations (Häberlein & Hövel, 2023; Hoblos et al., 2023; Lansing et al., 2023). Participants in the study emphasized the importance of regular engagement and clear communication with stakeholders to align their interests with the goals of digital transformation initiatives. For example, P1 (personal communication, April 12, 2024) highlighted the necessity of meeting with stakeholders regularly and maintaining open lines of communication to ensure alignment with organizational goals and strategies. P3 (personal communication, May 8, 2024) discussed the importance of brainstorming, decision-making, progress tracking, and risk mitigation activities to engage stakeholders effectively. The relationship between stakeholder resistance management and the literature review is evident in the emphasis on strategic stakeholder engagement and communication.

As identified in the literature review, effective stakeholder management involves identifying resistance sources and motivations and employing tailored strategies to address these concerns. This approach aligns with the stakeholder theory (Freeman, 1984), which posits that stakeholder engagement is a dynamic and iterative process that requires continuous feedback and adaptation to manage resistance effectively. The strategies discussed by participants and supported by the literature review and conceptual framework highlight the importance of understanding stakeholder needs and motivations. Implementing targeted management strategies based on this understanding can significantly enhance the effectiveness of digital transformation initiatives in educational institutions.

Vendor Partner Engagement in Educational Digital Transformation

Early engagement ensures that the technologies and services vendors provide align with the goals and requirements of the institution. In the literature review, I highlighted effective stakeholder engagement, including vendor partners, as critical for the success of digital transformation. Leaders must identify and involve key stakeholders early to align their interests with the project goals (Hoblos et al., 2023; Tagscherer & Carbon, 2023). Interviews with participants underscored the importance of vendor partners. P4 (personal communication, May 10, 2024) noted that vendors provide critical software, equipment, and expertise necessary for project execution. Engaging vendor partners early in digital transformation allows educational institutions to tailor technological solutions to their specific needs, helping mitigate risks and proactively address challenges.

The conceptual framework emphasizes the importance of stakeholder collaboration and communication to foster a shared vision and achieve common goals (Freeman, 1984). Digital transformation in education involves vendor partners early to ensure their contributions are aligned with the objectives of the institution, thus facilitating a smoother and more effective implementation process. By following a structured engagement strategy with vendor partners, educational institutions can leverage the expertise and resources of these partners to drive successful digital transformations. This strategy includes clear communication of goals, regular updates, and collaborative problem-solving, ensuring that all parties are working towards the same objectives.

Valuing Stakeholder Contributions in Digital Transformation

Valuing stakeholder contributions in digital transformation fosters a positive and collaborative environment and encourages ongoing participation and support. In the digital transformation process, the contributions of the stakeholders are essential for the success of any project (Evans et al., 2023; Hoblos et al., 2023; Verhoest et al., 2024). Recognizing and valuing these contributions helps in building a collaborative environment. According to P4 (personal communication, May 10, 2024), "engaging stakeholders to be able to be innovative and curious about what we're doing" is pivotal for overcoming challenges in projects, especially in greenfield designs. (personal communication, May 10, 2024). Leaders can enhance their commitment by acknowledging and valuing stakeholders' efforts, ensuring their ongoing support and participation (Hoblos et al., 2023; Osobajo et al., 2023). This directly aligns with the findings from the data analysis, where participants noted the importance of clear communication and appreciation of stakeholder input to maintain their engagement and motivation. Acknowledging and valuing stakeholders' contributions fosters a positive and collaborative environment and aligns with the theoretical underpinnings of stakeholder theory. This approach is essential for maintaining stakeholder engagement and ensuring the success of digital transformation initiatives, as evidenced by the literature review and the insights of the participants in the study.

Comprehensive Stakeholder Engagement Framework for Digital Education

A detailed framework for stakeholder engagement ensures structured and effective involvement throughout the digital transformation process, incorporating

strategies for communication, feedback, training, and support tailored to different stakeholder groups. Stakeholder empowerment and engagement are critical success factors in digital transformation, accelerating value creation and maintaining stakeholders' commitment (Freeman et al., 2021). Effective engagement involves collaborative efforts to create shared value, aligning organizational objectives with stakeholders' needs (Strand & Freeman, 2013). The interviewees revealed key strategies such as regular communication through diverse channels and breaking large projects into manageable milestones to gain stakeholder confidence and support. By integrating these theoretical and practical insights, the comprehensive stakeholder engagement framework provides a robust approach to navigating digital transformation, ensuring the alignment of business goals with stakeholders' needs and fostering collaborative value creation. Integrating these theoretical and practical insights, the comprehensive stakeholder engagement framework provides a robust approach to navigating digital transformation, ensuring alignment of business goals with stakeholders' needs and fostering collaborative value creation.

Theme 2: Communication and Collaboration

Effective stakeholder engagement hinges on robust communication channels and collaborative strategies that ensure all stakeholders are aligned and working towards common goals. All participants suggested that various communication methods, including in-person meetings, webinars, and presentations, facilitated the engagement of stakeholders across different levels of the organization. This highlights the necessity of diverse communication channels to address the varying needs and preferences of

stakeholders. The stakeholder theory emphasizes incorporating all interests of the stakeholders in the decision-making processes to generate collective value that involves both primary and secondary stakeholders to ensure effective governance and successful digital transformation (Freeman, 1984). The alignment of stakeholder interests through continuous engagement and effective communication strategies is essential for overcoming the challenges associated with digitalization in education.

Integrating the insights from the literature review, conceptual framework, and data analysis highlights the essential role of communication and collaboration in engaging stakeholders effectively. This alignment fosters a cohesive approach to digital transformation, ensuring all stakeholders are committed to and supportive of the organization's strategic objectives. The following subthemes emerged from the main theme: (a) effective communication channels for digital transformation, (b) vision alignment for stakeholders in digital education, and (c) national and regional team collaboration in digital education.

Table 5

Communication and Collaboration Theme and Subthemes

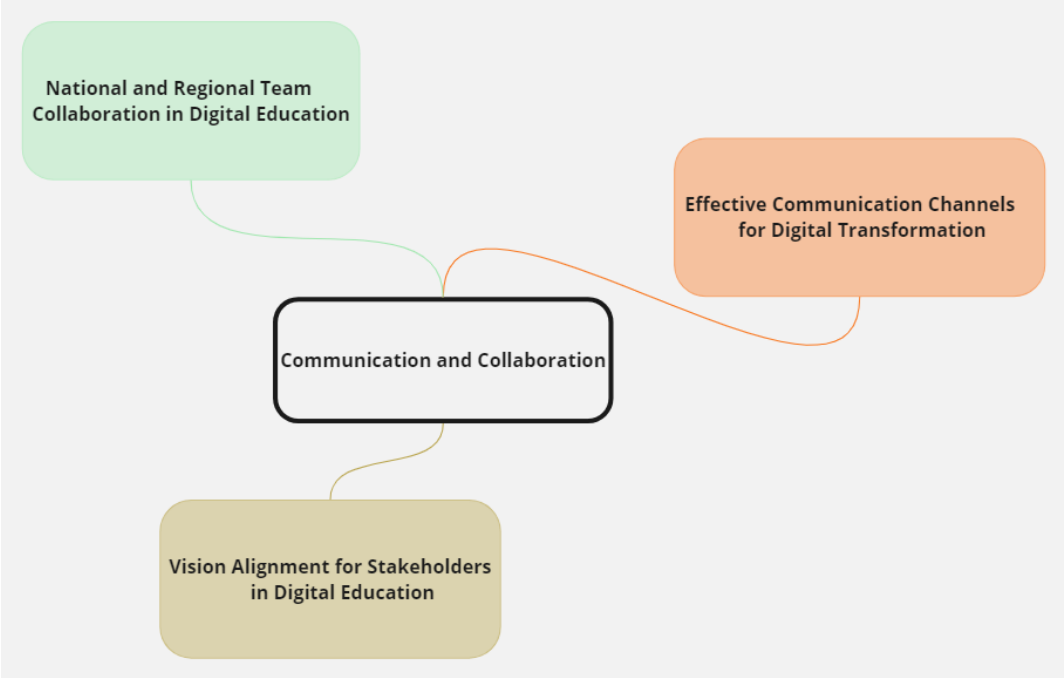
Themes/Codes	Addressing Stakeholder Resistance	Communication Methods	Stakeholder Engagement Strategies	Stakeholder Identification
Communication and Collaboration	**8**	**22**	**20**	**13**
Effective Communication Channels for Digital Transformation	4	17	9	7
National and Regional Team Collaboration in Digital Education	2	2	2	2

Vision Alignment for Stakeholders in Digital Education	2	3	9	4

Note. Table 5 shows the communication and collaboration theme table with the emerging subthemes.

Figure 3

Mind Map of Communication and Collaboration



Effective Communication Channels for Digital Transformation

Employing a variety of communication channels, such as regular meetings, digital platforms, and feedback sessions, ensures continuous engagement and alignment of stakeholders with the digital transformation goals. Communication and collaboration help address concerns promptly and maintain transparency (Hoblos et al., 2023; Martínez-Peláez et al., 2023; Verhoest et al., 2024). Interviews with stakeholders have highlighted the importance of diverse communication channels. For instance, P2 (personal

communication, May 10, 2024) noted that they might sometimes have meetings with slide decks and presentations, webinars or conferences, and, in other cases, in-person or smaller one-on-one meetings collaborating with colleagues and suppliers. These varied approaches ensure that stakeholders are informed and involved throughout the digital transformation process. Regular updates and multiple feedback avenues foster inclusion and collaboration, which are essential for managing rapid and complex changes in digital transformation. Multiple communication channels align with the conceptual framework and literature review on stakeholder engagement in digital transformation, indicating that through continuous diverse engagement methods, organizations can align stakeholder expectations, address resistance to change, and develop a comprehensive framework for educational institutions to involve and engage all stakeholders effectively.

Vision Alignment for Stakeholders in Digital Education

Effective communication from leaders about strategic objectives, expected benefits, and long-term goals is crucial in fostering stakeholders with the digital transformation vision of the institution. This shared understanding and commitment can significantly enhance the effectiveness of digital transformation efforts (Gandrita, 2023; Martínez-Peláez et al., 2023). According to P1 (personal communication, April 12, 2024), a straightforward narrative on what technologies and processes are being implemented and why it is essential for stakeholder alignment presents the competitive advantages of these implementations and helps in gaining stakeholder buy-in. Additionally, P2 (personal communication, April 15, 2024) noted the importance of regular meetings and continuous communication with stakeholders to ensure alignment

with the institution's vision. These interactions provide a context for the strategic vision by applying it to real-world situations, making it more concrete and comprehensible for stakeholders.

In the literature review on digital transformation in education, I underscored the necessity of aligning stakeholders with an institution's vision. When stakeholders understand the benefits and goals of digital transformation, they are more likely to support and participate actively in the initiative. This alignment facilitates smoother implementation and enhances the overall impact of digital transformation efforts on educational outcomes (Z. M. Cheng et al., 2024; Martínez-Peláez et al., 2023). This theme relates to the conceptual framework of stakeholder theory, which suggests that the success of any initiative depends on the active participation and support of all stakeholders (Freeman, 1984). Leaders can leverage their support and resources to drive the initiative forward when stakeholders are aligned with the institution's vision for digital transformation. Aligning stakeholders with the institution's vision for digital transformation through clear and consistent communication fosters a collaborative environment where stakeholders work towards common goals, thus enhancing the overall effectiveness of the digital transformation process.

National and Regional Team Collaboration in Digital Education

Effective collaboration ensures efforts are coordinated across different organizational levels, maintaining consistency and addressing regional specificities. In the literature review, I highlighted that digital transformation in education requires a coordinated effort among stakeholders to align educational objectives with technological

advancements. This alignment fosters an inclusive and high-quality learning environment where leaders must engage stakeholders at all levels to ensure a seamless transition to digital transformation in education (Eden et al., 2024; Kamalov et al., 2023). Additionally, interviews with participants highlight the importance of collaboration and stakeholder management, as emphasized by P5 (personal communication, May 23, 2024), who noted that influencing and collaboration are essential assets for success and that digital leaders should dedicate a significant amount of time to them. This approach ensures the successful implementation of digital projects and promotes a sense of ownership and responsibility among stakeholders, enhancing the overall effectiveness of the initiatives.

Actively involving national and regional teams in the digital transformation process enables educational leaders to align technological initiatives with the specific needs and contexts of different regions, thereby maximizing the benefits of digital education and ensuring long-term sustainability. The national and regional team collaboration theme in digital education aligns with the broader literature on digital transformation and stakeholder engagement. Research emphasizes that digital transformation is not just a technological shift but a comprehensive change involving strategic planning, stakeholder engagement, and continuous adaptation to evolving needs (Cosa, 2023; Eden et al., 2024; Hoblos et al., 2023). Effective stakeholder collaboration is highlighted as a critical factor for overcoming the challenges associated with digital transformation, such as ensuring equitable access to technology and providing adequate training for educators.

Theme 3: Financial Justification and Analysis

Financial justification and analysis involve evaluating the existing processes, conducting gap analysis, and performing buy versus build analyses to determine the most cost-effective solutions. P3 (personal communication, May 8, 2024) emphasized the importance of conducting a thorough gap analysis to identify the right solution for digital transformation projects to help decide whether to build a new system or utilize an existing one based on cost-effectiveness and value proposition. In the literature review, I highlighted the importance of evaluating the potential benefits and costs of adopting new technologies while tying the conceptual framework of the doctoral study proposal to integrate financial justification as a critical component of digital transformation. This relationship underscores the importance of stakeholder engagement in financial discussions to align technological advancements with organizational goals and financial constraints.

Organizations can achieve a balanced approach between innovation and fiscal responsibility by incorporating financial rationale and analysis into the digital transformation process. This method enables well-informed decisions, improves the efficiency and effectiveness of technology adoption, and builds the trust of the stakeholders and support for transformative projects (Martínez-Peláez et al., 2023). The following subthemes emerged from the main theme: (a) emphasizing return on investment (ROI) for stakeholder support in digital education, (b) cost of goods (COGS) analysis for educational technology implementation, and (c) showcasing benefits and

competitive advantage in digital education to ensure value and efficiency in decision-making.

Table 6

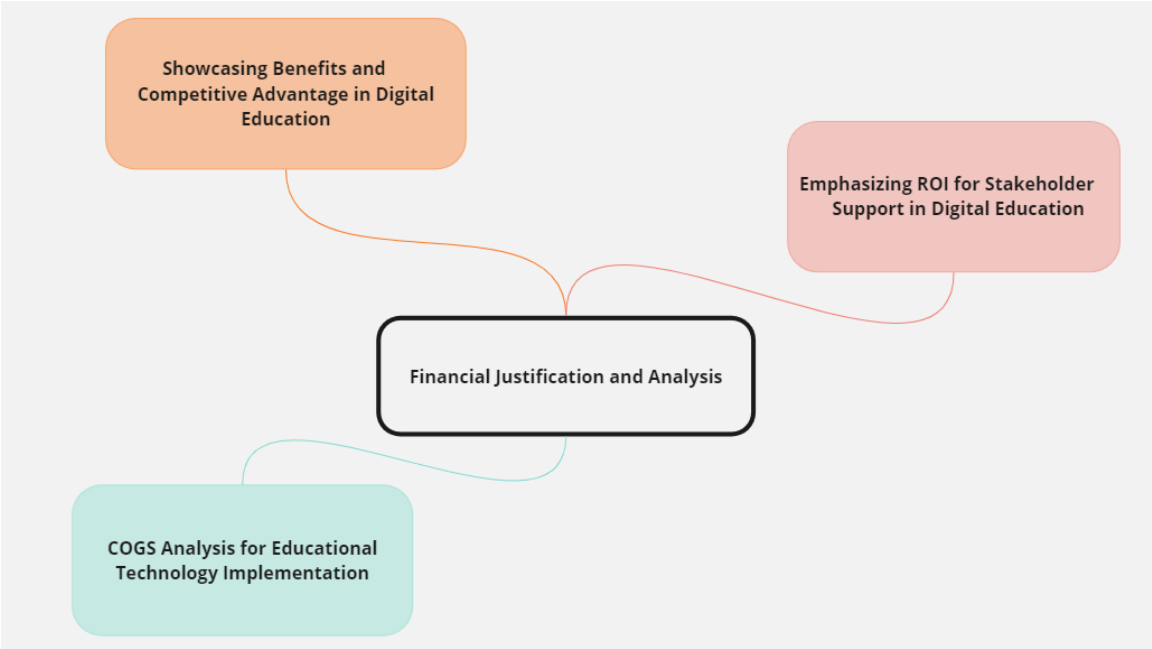
Financial Justification and Analysis Theme and Subthemes

Themes/Codes	Addressing Stakeholder Resistance	Communication Methods	Stakeholder Engagement Strategies	Stakeholder Identification
Financial Justification and Analysis	4	3	8	3
COGS Analysis for Educational Technology Implementation		1	5	
Emphasizing ROI for Stakeholder Support in Digital Education	1	1	2	
Showcasing Benefits and Competitive Advantage in Digital Education	3	1	1	3

Note. Table 6 shows the financial justification and analysis theme table with the emerging

Figure 4

Mind Map of Financial Justification and Analysis



Emphasizing ROI for Stakeholder Support in Digital Education

Business leaders can gain stakeholder support by presenting detailed analyses showcasing how new technologies and processes lead to improved educational outcomes, cost savings, and long-term benefits, making a compelling case for adoption. The theme of emphasizing ROI to gain stakeholder support aligns with the findings from participant interviews. P3 (personal communication, May 8, 2024) mentioned the importance of conducting a gap analysis and engaging in discussions about COGS, research and development (R&D), and ROI to drive the adoption of modern technology and processes. Business leaders can demonstrate the tangible benefits of digital transformation by thoroughly analyzing potential improvements in educational outcomes and cost

efficiencies (Agustian et al., 2023; Vuchkovski et al., 2023; Wu et al., 2024). This approach aligns with the conceptual framework that emphasizes the role of stakeholder engagement and effective communication strategies in successful digital transformation initiatives.

In the literature review, I discussed the relationship between emphasizing ROI and stakeholder support, showcasing how clear communication of financial benefits and cost savings can mitigate resistance to change. Emphasizing ROI supports the adoption of new technologies and aligns with the broader objective of enhancing stakeholder engagement to facilitate successful digital transformation in education (Abdurrahman et al., 2024; Kallmuenzer et al., 2024; Martínez-Peláez et al., 2023). By clearly presenting the ROI of digital transformation projects, business leaders can effectively engage stakeholders, ensuring their support and collaboration in implementing new technologies and processes that lead to improved educational outcomes and cost savings.

COGS Analysis for Educational Technology Implementation

Conducting a thorough study of the cost of goods sold (COGS) is vital for showcasing the financial feasibility of digital transformation projects in education. Through a thorough analysis of the expenses associated with current technologies compared to newer alternatives, business leaders may make well-informed choices and provide a concise financial rationale to stakeholders, guaranteeing the efficient and successful adoption of educational technology (Hubbart, 2023; Martínez-Peláez et al., 2023). The relationship between COGS analysis and the conceptual framework in the literature analysis can be understood through its focus on stakeholder engagement and

decision-making processes. Thus, by demonstrating clear financial benefits and cost savings through COGS analysis, educational leaders can address stakeholder resistance and align their interests with the project's goals.

This approach aligns with the feedback during the interviews with the digital transformation leaders, who emphasized the importance of financial viability and the need for clear justifications for technological investments. P3 (personal communication, May 8, 2024) noted the significance of conducting a proper buy versus build analysis, which often involves discussions on COGS, research and development (R&D), and return on investment (ROI) to show the value of the proposed solutions. A comprehensive COGS analysis is pivotal for the successful implementation of educational technology. It supports the conceptual framework by providing a structured method to evaluate and justify costs, facilitating stakeholder engagement and decision-making. As discussed in the literature, this analysis ensures that digital transformation projects are innovative and financially sustainable, ultimately leading to more effective and efficient educational outcomes. A thorough evaluation of the cost of goods sold (COGS) is crucial for effectively applying educational technology. It enhances the conceptual framework by offering a systematic approach to assessing and validating expenses, promoting stakeholder involvement and decision-making.

Showcasing Benefits and Competitive Advantage in Digital Education

Demonstrating the benefits and competitive advantages of digital transformation initiatives in educational institutions, highlighting educational outcomes, operational efficiencies, and competitive positioning improvements. According to the

data analysis from participant interviews, stakeholders are more likely to support digital transformation when they see tangible benefits. P3 (personal communication, May 8, 2024) emphasized the importance of aligning technology implementation with the strategic vision of the institution, which includes providing a straightforward narrative of the competitive advantages gained through new skills and technologies. P2 (personal communication, April 15, 2024) noted that engaging stakeholders through presentations and follow-up discussions that contextualize technological changes in real-world scenarios fosters a deeper understanding and buy-in. Operational efficiencies like streamlined processes and cost savings highlight the value of digital transformation. Additionally, adopting cutting-edge technologies enhances the competitive positioning of an institution, attracting more students and faculty and securing a competitive edge.

The relationship between the theme and the conceptual framework is evident in the focus on stakeholder engagement strategies. Involving stakeholders early and continuously in the digital transformation process helps align their expectations with the institution's vision (Alojail & Khan, 2023; Martínez-Peláez et al., 2023; Paul et al., 2024). This alignment is achieved by clearly communicating the benefits and competitive advantages, as highlighted in the data analysis and literature review. The conceptual framework emphasizes that effective engagement and communication strategies are essential for overcoming resistance and achieving a successful digital transformation. The evidence from participant interviews and the literature review supports the importance of clear communication and alignment with the institution's strategic vision. This approach

facilitates smoother implementation and ensures sustained support from all stakeholders involved.

Business Contributions and Recommendations for Professional Practice

The findings of this research study have significant implications for professional business activity, including digital transformation in educational institutions. The research participants emphasized the critical significance of including stakeholders, effective communication, and providing financial justification to ensure the success of digital initiatives. These traits are critical in the education industry and other industries that are undergoing digital transformation (Alojail et al., 2023; McCarthy et al., 2023; N. Nguyen et al., 2024). Customized engagement techniques are essential for effectively addressing the distinct requirements and apprehensions of various stakeholders. Employing various communication channels improves collaboration and guarantees that all perspectives are acknowledged and valued. Financial evaluations, such as return on investment (ROI) and cost of goods sold (COGS), are vital for evaluating the financial feasibility of digital initiatives and demonstrating their potential benefits. Focusing on these critical elements, educational leaders can navigate the complexities of digital transformation, achieving sustainable and impactful changes in the education sector.

Filling Gaps in Understanding and Effective Business Practice

Integrating effective stakeholder engagement strategies into business practices can bridge gaps in understanding, reduce resistance, and lead to the successful implementation of digital transformation initiatives in education. Addressing the unique needs and motivations of different stakeholder groups requires tailored engagement

strategies that include early involvement and continuous communication through various channels, which are key to reducing resistance and fostering collaboration (Bozkus, 2024; Hoblos et al., 2023; Martínez-Peláez et al., 2023). The customized strategy for involving stakeholders is vital as it directly addresses the varied requirements of distinct groups, thereby diminishing opposition and enhancing cooperation. Including local teams in strategic decision-making is consistent with stakeholder theory, which asserts that the generation of value necessitates the involvement of all parties with a vested interest. By engaging stakeholders from the inception of digital transformation projects, organizations can guarantee that their concerns and motivations are considered, resulting in more effective execution of digital initiatives.

Businesses can address shortcomings in their current processes by using various communication and collaboration techniques that help ensure stakeholders are consistently engaged, and their efforts align with the organization's goals. Diverse communication methods, including regular meetings, webinars, and presentations, are vital for engaging stakeholders at different organizational levels and keeping them informed and involved throughout the digital transformation process (Evans et al., 2023; Verhoest et al., 2024; Vuchkovski et al., 2023). Consistent and open communication is essential for ensuring stakeholders are fully supportive and on the same page. Organizations can cater to the diverse requirements and preferences of stakeholders by using several communication channels, ensuring that all individuals are well-informed and actively involved. This strategy facilitates the timely resolution of issues and the

promotion of transparency, which fosters a cohesive approach to digital transformation, enhancing the likelihood of success.

Integrating comprehensive financial assessments into corporate procedures can significantly improve decision-making processes and guarantee the financial sustainability of digital transformation projects. Conducting a thorough gap analysis and engaging in discussions about COGS, R&D, and ROI to drive the adoption of modern technology and processes emphasizes the need for transparent financial justifications to demonstrate the value of digital initiatives (Campagna & Bhada, 2024; Santos & Berssaneti, 2024; Wirtz et al., 2022). Financial reasons are crucial for making decisions and establishing budgetary accountability. Business leaders may make a compelling case for adopting digital transformation initiatives by providing comprehensive analyses highlighting possible advantages and financial savings. This strategy establishes confidence and ensures essential support from stakeholders by showcasing the concrete advantages and enduring worth of digital initiatives and aligning technological advancements with organizational goals and financial constraints.

Recommendations for Business Leaders

Business leaders should implement tailored stakeholder engagement strategies to engage key stakeholders in the digital transformation process effectively. Personalized engagement strategies should incorporate frequent communication, inclusive decision-making processes, and specialized training sessions, guaranteeing that every group feels appreciated and actively engaged. Business executives offer guidance and allocate resources, project managers supervise the execution of plans, and stakeholder relationship

managers promote communication and involvement. Results should be communicated through internal reports, stakeholder meetings, and workshops to ensure openness, solicit input, and enhance the capabilities of stakeholders.

Stakeholders can be informed and engaged through face-to-face meetings, webinars, internet platforms, and feedback sessions. Communication team leads, digital transformation leaders, and IT department leads can use email, social media, and video conferencing to reach more people, accommodate different communication preferences, and successfully disseminate important information. This complete technique fosters cooperation and consistent input collection and handling, boosting stakeholder involvement and project success. Enhancing communication and collaboration efforts through internal newsletters, training sessions, and industry conference presentations improves openness and continuing improvement, encouraging digital transformation success at educational institutions.

To ensure financial sustainability, the costs and returns of planned digital initiatives must be examined in detailed ROI and COGS assessments. Financial analysts, CFOs, and business development teams perform these assessments and communicate the results to stakeholders to highlight possible advantages and cost reductions. To guarantee complete communication and organizational alignment, business case documentation, strategic planning sessions, and industry publications should be used to share the findings. This organized method helps stakeholders buy in and make digital transformation decisions.

Implications for Social Change

The focus of this study on effective stakeholder engagement in digital transformation initiatives within educational institutions aims to bridge the gap between technological advancements and their practical implementation, ensuring that all stakeholders are actively involved and benefit from the changes. The potential for effecting positive social change by promoting the worth, dignity, and development of individuals, communities, organizations, institutions, cultures, or societies.

The findings of this research have the potential to bring about tangible improvements for individuals by offering educational resources that are more easily accessible, inclusive, and of superior quality. The implementation of digital transformation in education has the potential to equalize access to educational resources, thereby mitigating the inequalities resulting from geographical and economic obstacles (Kamalov et al., 2023; Kaputa et al., 2022; Kuhn et al., 2023). For example, the use of Open Educational Resources (OER) can substantially reduce the expense of educational materials, enhancing the affordability of education for students from various socioeconomic backgrounds (Rush & Landgraf, 2023; Sergiadis et al., 2024; Tlili et al., 2023). By actively involving educators, students, and parents and integrating their input, the educational experience can be customized to accommodate various learner groups' distinct requirements and preferences, hence promoting a more comprehensive and encouraging learning atmosphere. Through effective stakeholder engagement, digital transformation in education can significantly enhance accessibility, inclusivity, and

quality of educational resources, thereby reducing disparities caused by geographical and economic barriers.

Educational institutions can leverage these insights to create an inclusive and innovative environment that supports successful digital transformation and long-term operational excellence. Through the findings from the study, I highlighted the significance of strategic collaboration, continuous communication, and tailored engagement strategies to align stakeholders' interests with organizational goals. Participants emphasized the necessity of regular updates, participatory decision-making, and targeted training sessions to ensure stakeholder alignment and productivity (Cosa, 2023; Evans et al., 2023; Hoblos et al., 2023). This approach improves educational outcomes and operational efficiencies by fostering a collaborative culture that values stakeholder contributions. Consequently, educational institutions can leverage these insights by adopting continuous communication and strategic collaboration to manage resistance better to change and promote innovation, thereby building resilience in the face of technological advancements.

As digital technologies become integral to education, societies can cultivate a technologically proficient workforce prepared for the modern economy. The emphasis on an inclusive approach to digital transformation will ensure that governing bodies include marginalized and underserved communities (Mhlanga, 2024; Paul et al., 2024; Qureshi, 2023). Participants noted that addressing resistance and encouraging active stakeholder participation is essential for creating equitable educational systems (Freeman, 1984). Effective engagement strategies can mitigate resistance and promote a culture of

inclusion and innovation in education. Educational institutions can adopt this strategy to prepare the workforce for future economic demands and ensure that every community is included in the digital transformation process. The findings contribute to societal advancements by fostering digital literacy and lifelong learning, ultimately leading to more equitable and future-ready educational systems.

In this research project, I present a comprehensive approach to enhancing the success of digital transformation in education through effective stakeholder engagement strategies. Recent studies have shown that stakeholder involvement is essential for aligning digital transformation initiatives with organizational goals, reducing resistance to change, and enhancing the overall effectiveness of digital projects. Educational institutions that promote inclusive and participatory processes can use the findings to potentially bring about substantial beneficial social change, enhancing educational outcomes, operational efficiencies, and societal preparedness for future technological breakthroughs.

Recommendations for Further Research

The study was limited to the Western United States, which may not fully represent the diverse contexts and challenges faced by educational institutions worldwide, which inherently limits the applicability of the findings to other regions with different socio-economic and cultural contexts. Expanding future research to include different geographical regions can help capture more experiences and insights. Different regions may have unique challenges and opportunities that are not present in the Western United States. For instance, the digital infrastructure in developing countries differs

significantly from that in developed regions, which can influence the success of digital transformation initiatives. Therefore, by including diverse geographical contexts, future research can develop region-specific strategies and enhance the generalizability of the findings, ultimately contributing to more universally applicable recommendations for digital transformation in education.

I primarily focused on successful digital transformation initiatives in this research project, but understanding unsuccessful or partially successful initiatives can provide valuable insights. Understanding why certain initiatives failed can be as instructive as understanding why others succeeded. Through this balanced perspective, researchers can uncover critical insights into risk factors and mitigation strategies, offering a more comprehensive understanding of the digital transformation landscape. Consequently, future research should incorporate successful and unsuccessful digital transformation cases to develop a holistic framework that addresses the enablers and barriers to success in educational institutions.

The fast pace of technological change poses a significant limitation as research findings can quickly become outdated. Future research should incorporate longitudinal studies that track the evolution of digital transformation initiatives over time. Longitudinal studies allow for observing changes and developments, providing insights into how digital transformation strategies must adapt to remain effective. This approach can help researchers capture the dynamic nature of technology and offer more enduring insights into stakeholder engagement strategies. Thus, longitudinal studies are essential

for understanding the long-term impacts of digital transformation and for developing adaptable strategies that remain relevant amidst rapid technological changes.

In this research project, I focused on stakeholders with strategic decision-making experience, potentially overlooking the perspectives of other critical stakeholders such as teachers, students, parents, and IT personnel. Including a more diverse range of stakeholders can help researchers identify unique challenges and opportunities that may not be evident from a managerial viewpoint. For example, teachers and students may have direct insights into the practical challenges of implementing digital technologies in the classroom. At the same time, IT personnel can provide technical perspectives on the feasibility and scalability of these initiatives. Future research should engage a broader spectrum of stakeholders to capture a more comprehensive understanding of the digital transformation process. This would ensure that all relevant perspectives are considered in developing effective stakeholder engagement strategies.

Financial models and techniques such as cost-benefit analysis, return on investment (ROI), and cost of goods sold (COGS) analysis were critical for demonstrating digital initiatives' financial viability. Future studies should delve deeper into these financial models to provide a more detailed framework for decision-making in digital transformation initiatives. Detailed financial analyses can help stakeholders understand the economic implications of adopting new technologies, facilitating more informed and strategic decisions. In future studies, researchers should explore specific financial justification techniques to offer robust financial frameworks that support the

successful implementation and sustainability of digital transformation projects in educational institutions.

Effective engagement frameworks that incorporate communication, feedback, training, and support strategies tailored to different stakeholder groups are crucial for the success of digital transformation initiatives. Future research should focus on developing and testing comprehensive engagement frameworks. These frameworks should be adaptable to various contexts and capable of addressing the specific needs and motivations of different stakeholders. Through these frameworks, researchers can provide practical guidelines for educational leaders that can enhance stakeholder involvement and digital transformation success. Developing and validating comprehensive stakeholder engagement frameworks is essential for guiding educational leaders in effectively involving stakeholders and ensuring the success of digital transformation initiatives.

Qualitative interviews are susceptible to biases such as memory inaccuracies and self-reporting biases, which can affect the validity and reliability of the findings. Future research should consider using mixed methods to triangulate data from multiple sources, including surveys, observational studies, and document analysis. Triangulation enhances the reliability and validity of findings by cross-verifying data from different perspectives. This method helps mitigate the limitations of qualitative interviews, providing a more comprehensive and accurate understanding of stakeholder engagement in digital transformation initiatives. In future research, using mixed methods can improve the robustness of its findings, offering more reliable and valid insights into the factors that influence digital transformation success in education.

Conclusion

Effective stakeholder engagement is critical for successful digital transformation initiatives in education. Strategic, inclusive, and collaborative approaches are needed to ensure that digital initiatives are sustainable and beneficial to all stakeholders. When educational leaders recognize and value stakeholder contributions, they can foster a positive environment that supports ongoing participation and enhances the overall success of digital transformation initiatives. In this research, I provide a practical guide for educational institutions seeking to navigate the complexities of digital transformation and achieve long-term success.

Successful digital transformation in education hinges on strategic stakeholder engagement. Local team engagement, including the proactive participation of educators, IT personnel, and administrative staff, is critical for aligning technological advancements with educational goals. Strategic tactics like regular updates and participatory decision-making foster stakeholder alignment and productivity. Managing resistance involves understanding the needs of the stakeholders and implementing tailored approaches to address concerns. Early vendor partner engagement ensures that technologies align with institutional goals, facilitating smoother implementation. Valuing stakeholder contributions creates a positive, collaborative environment that encourages ongoing participation and support. These findings align with Freeman's stakeholder theory, emphasizing that value creation necessitates the involvement and contribution of all stakeholders.

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Appendix A: Invitation Email

Subject line:
Interviewing digital transformation leaders

Email message:
There is a new study about improving the effectiveness of digital transformation in education through stakeholder engagement that could help business leaders better understand and develop a comprehensive framework that can be used by educational institutions as a guide during their digital transformation processes. For this study, you are invited to provide your experiences and insights in to effectively involving stakeholders in the digital transformation process.

About the study:

- One 20–30-minute MS Teams/phone/Zoom/ interview that will be audio recorded (no videorecording)
- To protect your privacy, the published study will not share any names or details that identify you.

Volunteers must meet these requirements:

- Business leader
- Has been involved in digital transformation.

This interview is part of the doctoral study for Michael Ochieng, a DBA. student at Walden University. Interviews will take place during April/May, 2024.

Please reach out to michael.ochieng@waldenu.edu to let the researcher know of your interest. You are welcome to forward it to others who might be interested.

Appendix B: Consent Form

Interview of Professionals Consent Form for DBA Qualitative Pragmatic Inquiry Doctoral Study

You are invited to take part in an interview for a study that I am conducting as part of my Doctorate of Business Administration research.

Interview Procedures:
If you agree to be part of this study, you will be invited to take part in an audio-recorded interview about your professional experiences. Opportunities for clarifying statements will be available (via a process called member checking). Transcriptions of interviews will be analyzed as part of the study, along with public documents and records.

Voluntary Nature of the Study:
This study is voluntary. If you decide to join the study now, you can still change your mind later.

Risks and Benefits of Being in the Study:
Being in this study would not pose any risks beyond those of typical daily life. This study's aim is to provide data and insights that could be valuable to people in your profession.

Privacy:
Interview recordings and full transcripts will be shared with each interviewee, upon request. Redacted transcripts with names or sensitive information removed may be shared with my university faculty and my peer advisors. Any reports, presentations, or publications related to this study will share general patterns from the data, without sharing the identities of individual participants or partner organizations. The interview transcripts will be kept for at least 5 years, as required by my university.

Contacts and Questions:
If you want to talk privately about your rights as a participant, you can call the Walden University Research Participant advocate via 612-312-1210. Walden University's ethics approval number for this study is 03-20-24-1170968.

Please share any questions or concerns you might have at this time. If you agree to be interviewed as described above, please reply to this email with the words, "I consent."

Appendix C: Sample Interview Protocol

<table>
<tr><th colspan="2">Interview Protocol</th></tr>
<tr><td colspan="2">What effective stakeholder engagement strategies do business leaders in the education industry use to increase the success rate of the digital transformation initiative?</td></tr>
<tr><td>What I will do</td><td>What I will say—script</td></tr>
<tr><td>I will provide an introduction, clarify the aim of the interview, and highlight how their insights will contribute to the overarching objectives of the project. I will reassure them of the strict adherence to confidentiality protocols and the confidential handling of the information they disclose.</td><td rowspan="3">Greetings, I am Michael Ochieng, a candidate pursuing a Doctor of Business Administration degree at Walden University. My research focuses on improving the effectiveness of digital transformation in education. My objective is to discover efficient methods of involving stakeholders to facilitate incorporating digital technology in education. I appreciate your valuable comments as we explore various experiences, viewpoints, and approaches to effectively involve stakeholders in this digital transformation. I aim to gather insights in this interview to develop a comprehensive framework that can be used by educational institutions as a guide during their digital transformation processes. I guarantee absolute confidentiality with the information shared, which I will anonymize to ensure privacy protection. Your experience will be significant in formulating effective engagement tactics, substantially impacting achieving my research objectives. I appreciate your willingness to contribute to this study. The interview will take approximately 20 to 30 minutes. Before we begin, please review the signed consent form, and acknowledge if you would still like to participate in the study.</td></tr>
<tr><td>I will explain the duration of the interview.</td></tr>
<tr><td>I will review the signed consent form and confirm with the participant if they still wish to participate.</td></tr>
<tr><td>During the interview, I will closely observe nonverbal indicators, including body language, facial expressions, and tone of voice. This will enable me to analyze the responses better and alter my approach to ensure the participant feels comfortable and understood.</td><td>Please provide an overview of your background, experience, and role in leading digital transformation efforts within your organization.

1. How have you helped drive the adoption and implementation of modern technology and processes?</td></tr>
</table>

I will paraphrase their responses and seek confirmation to confirm the accuracy of my understanding and provide the interviewee with the chance to clarify or elaborate on their answers, fostering a more profound level of dialogue.	2. Who are the main stakeholders of the organization? 3. What strategies did you use to engage the stakeholders? 4. What critical topics of interest did you engage with each set of stakeholders? 5. What communication channels did you use to engage each set of stakeholders? 6. What type of activities did you engage with the stakeholders? 7. How did you ensure the stakeholders aligned with the company's vision? 8. What was the frequency of the interaction with the stakeholders? 9. What additional information about stakeholder engagement strategies would you like to share?
I will ask additional probing questions to explore the stated subjects further, prompting the participant to provide more detailed explanations of their experiences, ideas, and emotions in order to unearth profound and comprehensive insights that may not be revealed from the initial inquiry.	
Upon the completion of the interview, I will express my sincere gratitude to the participant for their time and invaluable contributions. To facilitate comprehension and address any remaining thoughts, I will provide a concise overview of the main themes presented.	Prior to finishing, I would like to convey my sincere gratitude for your active involvement and invaluable contributions to this research. Over the next few weeks, I will analyze the data collected from all interviews, including yours, in order to uncover patterns and develop informed suggestions. After completing the analysis, I will provide a thorough report that emphasizes the significant influence of the insights collected.
I will discuss the importance of the follow-up member-checking interview and explain that this step is crucial for validating the accuracy and interpretation of the information gathered. Together, we will schedule a convenient date and time to meet and agree on the interview delivery mode.	As we progress, the follow-up member-checking interview is essential in the research process. This process, which is crucial for confirming our initial conclusions with your viewpoints and experiences, seeks to improve the credibility and dependability of our findings. I acknowledge the significance of your time and pledge to make every effort to accommodate your schedule. Kindly provide me with your availability for a 15–20-minute follow-up session, which may be scheduled at your convenience using Zoom, MS Teams, or phone. I highly appreciate your participation, which will tremendously enhance the credibility and quality of the research. I appreciate your time and consideration.

<table>
<tr><th colspan="2">Follow–up Member Checking Interview</th></tr>
<tr><td>To commence the follow-up interview, I will reintroduce myself and refresh the participant's memory of our prior conversation, emphasizing the significance of their input to the research. The goal of the follow-up meeting is to ascertain the accuracy and completeness of the material collected during our initial interview. To facilitate a concentrated and efficient discussion, I will guarantee that the environment is pleasant and devoid of disturbances, thus fostering a conducive atmosphere for open and candid debate.</td><td>Greetings. I appreciate your presence again for this follow-up interview." I am Michael Ochieng, and our earlier discussion on enhancing digital transformation success in education through effective stakeholder engagement strategies significantly contributed to the research. Today, our objective is to improve and confirm the specifics discussed earlier to guarantee the precision and comprehensiveness of our findings. I have created a conducive environment for a concentrated discussion, appreciating your candid and sincere feedback as we explore particular subjects in depth. I highly value your contributions, as they are crucial to the success of our study. Therefore, I would appreciate any additional insights you can provide. Let's get started, shall we?"</td></tr>
<tr><td rowspan="5">I will share a copy of the concise synthesis for each individual question.

I will bring in probing questions related to other information that I may have found that adheres to the IRB approval.

I will walk through each question, read the interpretation, and ask:
Did I miss anything? Or what would you like to add?</td><td>Here is a concise synthesis of the key points we covered during our initial interview. I want to ensure that we have a clear and mutual understanding of the information that was shared, and it will also allow us to clarify any discrepancies or further details needed immediately. It is also an opportunity for you to review and refine the responses, ensuring they fully reflect your perspective and knowledge. I believe this method will significantly enhance the quality and accuracy of the information we collect today. Are you ready to get started with the first question?"</td></tr>
<tr><td>1. Question and succinct synthesis of the interpretation—perhaps one paragraph or as needed</td></tr>
<tr><td>2. Question and succinct synthesis of the interpretation—perhaps one paragraph or as needed</td></tr>
<tr><td>3. Question and succinct synthesis of the interpretation—perhaps one paragraph or as needed</td></tr>
<tr><td>4. Question and succinct synthesis of the interpretation—perhaps one paragraph or as needed</td></tr>
</table>

	5. Question and succinct synthesis of the interpretation—perhaps one paragraph or as needed