

Responsible Leadership, Digital Transformation Capability, and Sustainability Performance in Business and Higher Education Institutions

Dr. Alemar D. Betito¹, Dr. Jay A. Sario², Dr. Maria Rosario F. Briones³

¹University of Perpetual Help System DALTA – Las Piñas

²Philippine Christian University

³Polytechnic University of the Philippines / University of Perpetual Help System DALTA

DOI: <https://dx.doi.org/10.51584/IJRIAS.2026.11030061>

Received: 23 March 2026; Accepted: 28 March 2026; Published: 09 April 2026

ABSTRACT

This study examined the influence of responsible leadership and digital transformation capability on sustainability performance in business organizations and higher education institutions. Specifically, it determined the levels of responsible leadership, digital transformation capability, and sustainability performance; tested the significant relationships among these variables; examined the mediating role of digital transformation capability; and identified whether significant differences existed when institutions were grouped according to sector. Using a quantitative, explanatory-correlational, cross-sectional survey design, data were collected from 400 respondents, composed of 200 participants from business organizations and 200 participants from higher education institutions. The data were analyzed using weighted mean, standard deviation, Pearson product-moment correlation, independent samples t-test, and structural equation modeling for mediation analysis. The findings revealed that responsible leadership, digital transformation capability, and sustainability performance were all manifested at a high level.

The results further showed that responsible leadership had a significant positive relationship with digital transformation capability and sustainability performance, while digital transformation capability was also significantly and positively related to sustainability performance. Mediation analysis confirmed that digital transformation capability partially mediated the relationship between responsible leadership and sustainability performance. Comparative analysis revealed no significant sectoral difference in responsible leadership and sustainability performance, but a significant difference was found in digital transformation capability, with business organizations demonstrating relatively stronger digital readiness than higher education institutions. The study concludes that responsible leadership serves as a foundational organizational driver, while digital transformation capability functions as an enabling mechanism that strengthens sustainability performance across both sectors. The findings provide empirical support for an integrated framework linking leadership, digital capability, and sustainable institutional outcomes.

Keywords: responsible leadership, digital transformation capability, sustainability performance, business organizations, higher education institutions, cross-sector study

INTRODUCTION

Leadership has become a decisive organizational capability in an era marked by technological disruption, stakeholder scrutiny, and rising expectations for long-term sustainability. Within this evolving discourse, responsible leadership has gained prominence as a contemporary leadership perspective because it emphasizes ethical accountability, stakeholder orientation, and the creation of durable organizational value rather than narrow short-term results. Recent scholarship also shows that leadership is increasingly being examined in

relation to digital transformation, particularly in how leaders shape strategic direction, cultural readiness, innovation climate, and institutional adaptability. In this regard, digital transformation is no longer viewed as a purely technological initiative; rather, it is understood as a leadership-enabled organizational process that requires vision, coordination, and responsible decision-making.

When combined with sustainability performance as an outcome construct, these developments suggest that responsible leadership and digital transformation capability are now central variables in explaining how institutions remain relevant, resilient, and effective in rapidly changing environments (Heim et al., 2026; Hariyani et al., 2025).

This line of inquiry is especially relevant in both business organizations and higher education institutions, where digital transformation has become a strategic necessity rather than a peripheral reform agenda. In business settings, digital transformation capability is associated with improved responsiveness, process innovation, competitive adaptation, and the capacity to align technological initiatives with broader organizational objectives. In higher education, recent studies describe digital transformation as a management concern that extends beyond classroom technology to include governance, operational systems, institutional strategy, user experience, and new models of service delivery.

The literature further indicates that universities are under increasing pressure to strengthen institutional readiness, leadership support, infrastructure, and digital competencies in order to remain effective and sustainable in a digitally intensive environment. These developments imply that both sectors are confronting similar transformation pressures, yet they may differ in how leadership practices and digital capabilities translate into sustainability performance. As such, examining these variables across business and higher education institutions offers strong theoretical and practical value for contemporary organizational research (Carmo et al., 2025; Sacavém et al., 2025; Nazyrova et al., 2025).

Despite the growing literature, a significant research gap remains. Existing studies tend to examine responsible leadership, digital transformation, and institutional outcomes in fragmented ways, often focusing on a single sector, a single organizational issue, or a narrow implementation perspective. The recent review literature confirms the growing importance of responsible leadership, while digital transformation studies emphasize leadership's role in enabling sustainable transformation; however, there is still limited empirical work that integrates responsible leadership, digital transformation capability, and sustainability performance within one explanatory model, particularly across both business and higher education institutions. This gap is even more evident in the Philippine context.

The study of Betito (2026) is an important local contribution because it demonstrated, through a cross-sector analysis, that leadership may be meaningfully examined across business and academic institutions using a common organizational lens. Nevertheless, Betito's work focused on leadership styles, Total Quality Management integration, and operational excellence, and did not directly examine responsible leadership, digital transformation capability, and sustainability performance as interrelated constructs. Hence, the present study is warranted because it addresses the conceptual, sectoral, and local gaps in the literature by advancing a more integrated and contemporary framework for understanding leadership and sustainable institutional performance across two critical sectors (Betito, 2026; Heim et al., 2026; Hariyani et al., 2025).

Research Questions

This study seeks to examine the relationship among responsible leadership, digital transformation capability, and sustainability performance in business and higher education institutions.

General Research Question

How do responsible leadership and digital transformation capability influence sustainability performance in business and higher education institutions?

Specific Research Questions

1. What is the level of responsible leadership in business and higher education institutions?
2. What is the level of digital transformation capability in business and higher education institutions?
3. What is the level of sustainability performance in business and higher education institutions?
4. Is there a significant relationship between responsible leadership and digital transformation capability in business and higher education institutions?
5. Is there a significant relationship between responsible leadership and sustainability performance in business and higher education institutions?
6. Is there a significant relationship between digital transformation capability and sustainability performance in business and higher education institutions?
7. Does digital transformation capability significantly mediate the relationship between responsible leadership and sustainability performance in business and higher education institutions?
8. Is there a significant difference in the levels of responsible leadership, digital transformation capability, and sustainability performance when institutions are grouped according to sector (business and higher education)?

Framework of the Study

This study is anchored on the view that leadership, organizational capability, and sustainability outcomes are interrelated constructs that shape institutional effectiveness in increasingly complex and technology-driven environments. Specifically, the study positions responsible leadership as a strategic and ethical leadership orientation that enables institutions to respond to stakeholder expectations, organizational change, and long-term performance demands. The framework is informed by Stakeholder Theory, which explains that leaders are expected to create value not only for internal organizational actors but also for broader stakeholder groups whose interests influence institutional legitimacy and continuity.

In this context, responsible leadership is understood as a leadership approach characterized by accountability, ethical decision-making, stakeholder sensitivity, and long-term stewardship. The framework is further supported by Dynamic Capabilities Theory, which provides the conceptual basis for digital transformation capability by emphasizing an institution's ability to sense opportunities, seize them strategically, and reconfigure resources in response to environmental change. In addition, the study draws from the Triple Bottom Line perspective, which broadens the assessment of organizational success beyond economic or operational results to include socially and institutionally sustainable outcomes. Taken together, these perspectives provide a coherent explanation for why responsible leadership may serve as an antecedent of both digital capability development and sustainability performance in business and higher education institutions.

Based on these theoretical foundations, the study proposes that responsible leadership directly influences sustainability performance and indirectly influences it through digital transformation capability. The model assumes that leaders who demonstrate ethical orientation, strategic foresight, and stakeholder responsibility are more likely to cultivate institutional conditions that support digital transformation, including innovation readiness, adaptive capacity, process integration, and technology-enabled responsiveness. In turn, institutions with stronger digital transformation capability are expected to achieve higher sustainability performance because they are better equipped to improve efficiency, support long-term resilience, and align organizational practices with evolving institutional and societal expectations.

Thus, digital transformation capability is treated as a mediating mechanism that explains how responsible leadership is translated into sustainable institutional outcomes. The framework is applied across business organizations and higher education institutions, thereby allowing the study to examine whether the proposed relationships hold within two distinct yet increasingly comparable sectors. Overall, the framework advances a cross-sector and integrative explanation of how responsible leadership and digital capability interact to shape sustainability performance in contemporary institutional settings.

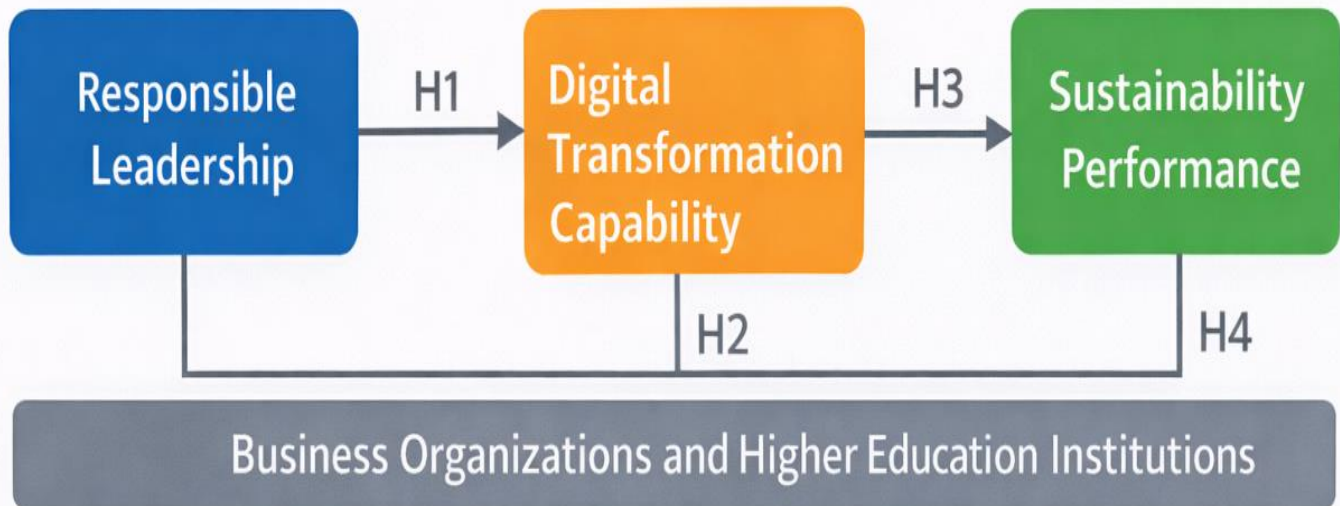


Figure 1: Research Paradigm of the Study

Figure 1 presents the conceptual model of the study, illustrating the hypothesized relationships among Responsible Leadership, Digital Transformation Capability, and Sustainability Performance within the context of business organizations and higher education institutions. In the model, Responsible Leadership is treated as the independent variable and serves as the primary driving force of the framework. It reflects a leadership orientation characterized by ethical accountability, stakeholder responsiveness, strategic foresight, and long-term institutional stewardship. The figure shows that responsible leadership directly influences Digital Transformation Capability, suggesting that leaders play a crucial role in shaping the institution’s readiness to adopt, integrate, and strategically utilize digital technologies, systems, and processes. This relationship implies that institutions are more likely to build strong digital capability when leaders foster innovation, support organizational learning, allocate resources responsibly, and create an environment that is receptive to change. At the same time, the model also proposes a direct path from responsible leadership to Sustainability Performance, indicating that leadership can influence sustainable institutional outcomes through its direct effect on policy direction, organizational culture, accountability, and stakeholder-oriented decision-making.

The figure further shows that Digital Transformation Capability functions as a mediating variable and has a direct influence on Sustainability Performance. This means that institutions with stronger digital capability are expected to achieve better sustainability outcomes because they are more capable of enhancing efficiency, improving service delivery, increasing responsiveness, supporting innovation, and strengthening long-term organizational resilience.

The mediating role of digital transformation capability suggests that the influence of responsible leadership on sustainability performance may occur not only directly, but also indirectly through the institution’s capacity to transform and adapt in a digitally evolving environment. By including business organizations and higher education institutions as the study context, the model allows for the examination of whether these hypothesized relationships hold across two different yet increasingly comparable sectors. Overall, Figure 1 provides an integrated and coherent representation of the study’s central argument: that responsible leadership serves as a foundational organizational driver, digital transformation capability operates as an enabling mechanism, and sustainability performance represents the long-term institutional outcome of these interrelated processes.

RESEARCH METHOD

This section presents the overall methodological approach of the study, including the research design, population, sample size and sampling technique, research instrument, data gathering procedure and statistical treatment of data used to examine the relationships among the variables.

Research Design

This study will employ a quantitative, explanatory-correlational, cross-sectional survey research design to examine the relationships among responsible leadership, digital transformation capability, and sustainability performance in business organizations and higher education institutions. This design is appropriate because the study seeks not only to determine the levels of the key variables but, more importantly, to test the direction, strength, and significance of the relationships among them within a theoretically grounded framework. Specifically, it is intended to examine whether responsible leadership significantly influences digital transformation capability and sustainability performance, whether digital transformation capability significantly affects sustainability performance, and whether digital transformation capability functions as a mediating variable in the relationship between responsible leadership and sustainability performance. The explanatory-correlational approach is suitable for this inquiry because it allows the researcher to investigate naturally occurring relationships among variables without manipulating the research environment, while providing a basis for model testing and empirical explanation of organizational phenomena. The cross-sectional survey component further strengthens the design by enabling the collection of standardized quantitative data from respondents at a single point in time, thereby capturing current perceptions and conditions in both business and academic settings. Since the study covers two institutional sectors and aims to generate generalizable and statistically analyzable findings, this design provides a systematic, efficient, and methodologically sound approach for examining the proposed relationships and for producing evidence that may support regression analysis or structural equation modeling in explaining how responsible leadership and digital transformation capability contribute to sustainability performance.

Population

The population of the study shall consist of employees and academic personnel from selected business organizations and higher education institutions who are in a position to provide informed responses regarding leadership practices, digital transformation initiatives, and sustainability-related performance within their respective institutions. In the business sector, the target population may include managers, supervisors, department heads, team leaders, and professional staff who are directly involved in organizational operations, strategic implementation, or digital initiatives. In the higher education sector, the population may include administrators, deans, program chairpersons, faculty members, and qualified non-teaching personnel who possess sufficient knowledge of institutional leadership, digital transformation efforts, and organizational performance. The inclusion of these two sectors is consistent with the cross-sector nature of the study and supports the objective of determining whether the proposed relationships among responsible leadership, digital transformation capability, and sustainability performance are evident across different institutional contexts. To ensure the relevance and credibility of the data, only respondents who have adequate tenure, organizational familiarity, and direct exposure to institutional policies and practices related to leadership, digital systems, and sustainability efforts shall be included in the population frame. Overall, the population is deliberately defined to capture respondents who are most capable of providing valid and experience-based assessments of the major constructs under investigation.

Sample Size and Sampling Technique

The study will employ purposive sampling in selecting respondents from business organizations and higher education institutions, as this technique is appropriate for identifying individuals who possess the specific knowledge, experience, and institutional exposure necessary to provide valid responses on responsible leadership, digital transformation capability, and sustainability performance. Only employees and academic personnel who are directly involved in organizational operations, leadership processes, digital initiatives, or institutional performance shall be included in the sample to ensure the relevance and credibility of the data collected. The study will utilize a total of 400 respondents, which is considered adequate for explanatory-correlational research and sufficient to support advanced statistical analyses such as regression and structural equation modeling (SEM). The respondents will be proportionately distributed across the two sectors, with 200 participants from business organizations and 200 participants from higher education institutions, to allow

meaningful cross-sector comparison. This sample size meets the recommended requirements for multivariate analysis and ensures statistical power for testing direct and mediating relationships among the variables. Overall, the use of purposive sampling combined with a well-defined and sufficiently large sample enhances the validity, reliability, and generalizability of the study's findings.

Research Instrument

The primary instrument of the study will be a structured survey questionnaire designed to measure the constructs of responsible leadership, digital transformation capability, and sustainability performance in business organizations and higher education institutions. The questionnaire will consist of four parts: the first part will capture the respondents' profile and institutional classification, while the succeeding sections will measure the three main variables using indicator-based statements adapted from established literature and previous empirical studies, with necessary modifications to align with the context of the present research. All items will be measured using a five-point Likert scale ranging from strongly disagree to strongly agree to ensure consistency and quantifiability of responses. To establish the validity of the instrument, it will undergo content validation by a panel of experts in leadership, business management, higher education, and quantitative research, who will evaluate the clarity, relevance, and alignment of each item with the study objectives. Prior to full-scale data collection, the instrument will be subjected to pilot testing involving at least 30 respondents who are not part of the final sample to assess its reliability and internal consistency. The reliability of each construct will be evaluated using Cronbach's alpha coefficient, where a value of 0.70 or higher will be considered acceptable, 0.80 or higher as good, and 0.90 or higher as excellent, in accordance with established research standards. In addition, where applicable, composite reliability (CR) values of 0.70 and above will be considered acceptable, and item-total correlations will be examined to ensure that each item contributes meaningfully to the overall scale. Any items that do not meet the acceptable thresholds will be revised or removed to improve the consistency of the instrument. Through these procedures, the research instrument is expected to demonstrate adequate validity and reliability, thereby ensuring that the data collected are robust, consistent, and suitable for subsequent statistical analysis.

Data Gathering Procedure

The data gathering procedure of the study shall begin with the preparation and finalization of the research instrument, followed by its submission for expert validation to ensure the clarity, relevance, and alignment of the items with the objectives of the study. After incorporating the recommendations of the validators, the revised questionnaire shall be pilot-tested among at least 30 qualified respondents who are not part of the final sample in order to establish the reliability and internal consistency of the instrument. Once the instrument has met the acceptable standards for validity and reliability, the researcher shall secure the necessary permissions and endorsements from the concerned institutions prior to the actual administration of the survey. Upon approval, the researcher shall identify the qualified respondents from selected business organizations and higher education institutions based on the established inclusion criteria and sampling procedure. Before distributing the questionnaire, the respondents shall be provided with an informed consent form explaining the purpose of the study, the voluntary nature of participation, the confidentiality of their responses, and their right to withdraw from the study at any time without penalty. The survey questionnaire may then be administered either through printed copies or secure online platforms, depending on the accessibility and preference of the participating institutions. After the retrieval of the accomplished questionnaires, the researcher shall check the responses for completeness, organize and encode the data systematically, and prepare them for statistical treatment. Throughout the entire data gathering process, the researcher shall strictly observe ethical standards, maintain the anonymity and confidentiality of the respondents, and ensure that all information collected is used solely for academic and research purposes.

Statistical Treatment of Data

The data collected in this study will be analyzed using appropriate descriptive and inferential statistical techniques to address the research questions and test the hypothesized relationships among responsible leadership, digital transformation capability, and sustainability performance. Descriptive statistics such as

frequency, percentage, weighted mean, and standard deviation will be utilized to summarize the respondents' profile and to determine the levels of the key variables. To examine the relationships among the variables, the Pearson product–moment correlation coefficient (r) will be employed to assess the strength and direction of association between responsible leadership, digital transformation capability, and sustainability performance. Furthermore, to test the predictive relationships and the overall structural model, multiple regression analysis or structural equation modeling (SEM) will be applied, depending on the nature of the data and the measurement model. In particular, SEM using Partial Least Squares (PLS-SEM) or covariance-based SEM may be utilized to simultaneously analyze direct and indirect effects and to test the mediating role of digital transformation capability in the relationship between responsible leadership and sustainability performance. The significance of the mediation effect will be determined using bootstrapping procedures, while model fit indices (if applicable) will be evaluated to assess the adequacy of the proposed model. In addition, independent samples t-test or other appropriate comparative statistical tests may be used to determine whether significant differences exist between business organizations and higher education institutions in terms of the variables studied. All statistical analyses will be conducted using recognized statistical software, and the level of significance will be set at 0.05, ensuring that the findings are robust, reliable, and suitable for drawing valid conclusions about the relationships among the variables.

RESULTS AND DISCUSSIONS

This section presents the results of the study based on the data collected from respondents in business organizations and higher education institutions. The findings are organized according to the sequence of the research questions and are supported by statistical analysis and corresponding interpretations.

The level of responsible leadership in business organizations and higher education institutions.

To determine the prevailing level of responsible leadership in business and higher education institutions, the responses of the participants were analyzed using the weighted mean and standard deviation. This analysis provides an empirical description of how respondents perceive leadership practices in terms of ethical accountability, stakeholder orientation, transparency, fairness, and long-term institutional stewardship. Since responsible leadership serves as the primary independent variable of the study, establishing its level is essential in understanding how leadership may influence digital transformation capability and sustainability performance across the two sectors.

Table 1 Level of Responsible Leadership in Business and Higher Education Institutions

Indicators of Responsible Leadership	Mean	SD	Interpretation
Leaders demonstrate ethical decision-making in institutional matters.	4.18	0.67	High
Leaders consider the interests of stakeholders in making decisions.	4.12	0.71	High
Leaders promote accountability in the workplace or institution.	4.21	0.65	High
Leaders communicate policies and decisions with transparency.	4.09	0.74	High
Leaders encourage fairness and respect in dealing with employees or personnel.	4.24	0.63	High
Leaders show commitment to long-term institutional welfare rather than short-term gain.	4.15	0.69	High
Leaders respond responsibly to organizational and societal concerns.	4.17	0.68	High
Overall Mean	4.17	0.68	High

Table 1 shows that the overall mean for responsible leadership is 4.17 with a standard deviation of 0.68, interpreted as High. This indicates that respondents generally perceive leaders in business organizations and higher education institutions as demonstrating responsible leadership to a considerable extent. The relatively moderate dispersion of responses suggests a fairly consistent assessment across respondents, implying that ethical accountability, stakeholder awareness, and institutional stewardship are observable leadership characteristics in the organizations included in the study. This result is consistent with recent scholarship describing responsible leadership as a leadership orientation centered on balancing stakeholder interests,

promoting ethical conduct, and supporting long-term organizational outcomes rather than merely short-term results (Heim et al., 2026; de Klerk & Jooste, 2023).

Among the indicators, the highest mean was obtained by “Leaders encourage fairness and respect in dealing with employees or personnel” (M = 4.24, SD = 0.63), followed by “Leaders promote accountability in the workplace or institution” (M = 4.21, SD = 0.65). These findings suggest that fairness, respect, and accountability are among the most visible manifestations of responsible leadership in the participating institutions. This pattern is theoretically and empirically defensible because recent responsible leadership research emphasizes that the construct is strongly associated with moral conduct, stakeholder responsiveness, and the creation of trustworthy and value-based relationships within organizations (de Klerk & Jooste, 2023; Heim et al., 2026). Empirical evidence also shows that responsible leadership can shape positive employee attitudes and prosocial workplace behavior, particularly when leaders demonstrate clear ethical standards and a strong sense of responsibility toward others (Abbas et al., 2022; Dong et al., 2021).

On the other hand, the lowest mean was recorded by “Leaders communicate policies and decisions with transparency” (M = 4.09, SD = 0.74), although it still falls within the High interpretation. This finding suggests that transparency is present, but comparatively less pronounced than fairness, respect, and accountability. From an institutional perspective, this may imply that while leaders are generally perceived as responsible, communication practices may still require strengthening to support more open, participative, and trust-based environments. This interpretation is aligned with recent discussions in the responsible leadership literature, which note that responsible leadership is not limited to ethical intent alone but also involves relational practices such as dialogue, stakeholder engagement, and visible accountability in decision processes (Heim et al., 2026; Tsui, 2021).

Overall, the findings indicate that responsible leadership is strongly manifested in both business and higher education institutions. This is an important result because it establishes that the sampled institutions possess a favorable leadership environment that may support organizational adaptability and long-term institutional performance. The finding is also broadly consistent with recent local and cross-sector evidence showing that leadership-related organizational practices remain significant in shaping institutional effectiveness in business and academic settings.

In particular, Betito (2026) found that leadership-related practices were significantly associated with operational excellence across business and academic institutions, suggesting that leadership remains a foundational driver of institutional outcomes in cross-sector contexts. Taken together, the present results support the assumption that responsible leadership constitutes a meaningful organizational resource that may later explain variations in digital transformation capability and sustainability performance in the succeeding parts of the analysis.

The level of digital transformation capability in business organizations and higher education institutions.

To assess the readiness and capability of institutions to adopt and utilize digital technologies, the level of digital transformation capability was analyzed using weighted mean and standard deviation. This analysis provides insight into how respondents perceive their institution’s ability to integrate digital systems, foster innovation, and develop the competencies necessary to respond to technological change. Since digital transformation capability functions as a key mediating variable in the study, understanding its level is essential in explaining how leadership translates into sustainability performance across business and higher education institutions.

Table 2 Level of Digital Transformation Capability in Business and Higher Education Institutions

Indicators of Digital Transformation Capability	Mean	SD	Interpretation
The institution has adequate digital infrastructure to support operations.	4.05	0.73	High
The institution effectively integrates digital technologies into its processes.	3.98	0.76	High
The institution promotes innovation through digital initiatives.	3.92	0.79	High
Employees/personnel possess sufficient digital skills and competencies.	3.85	0.81	High
Leadership supports digital transformation efforts.	4.08	0.70	High

The institution adapts quickly to technological changes.	3.90	0.78	High
Digital systems improve efficiency and service delivery.	4.02	0.74	High
Overall Mean	3.97	0.76	High

Table 2 shows that the overall mean for digital transformation capability is 3.97 with a standard deviation of 0.76, interpreted as High. This indicates that respondents generally perceive their institutions as digitally capable, although at a slightly lower level compared to responsible leadership. The relatively higher standard deviation suggests more variability in responses, implying that digital transformation capability may not be uniformly developed across all institutions. This finding is consistent with recent literature indicating that while many organizations and higher education institutions are progressing toward digital transformation, disparities still exist in terms of infrastructure, skills, and implementation maturity (Carmo et al., 2025; Olszak & Sączewska-Piotrowska, 2025).

Among the indicators, the highest mean was obtained by “Leadership supports digital transformation efforts” (M = 4.08, SD = 0.70), followed by “The institution has adequate digital infrastructure to support operations” (M = 4.05, SD = 0.73). These results suggest that leadership support and infrastructure readiness are key strengths in the digital transformation efforts of the participating institutions. This aligns with existing studies emphasizing that leadership commitment is a critical enabler of successful digital transformation, as it influences strategic direction, resource allocation, and organizational readiness (Schiuma et al., 2024; Hariyani et al., 2025). Furthermore, the availability of digital infrastructure is widely recognized as a foundational requirement for enabling innovation and improving operational efficiency in both business and academic settings (Carmo et al., 2025).

On the other hand, the lowest mean was observed in “Employees/personnel possess sufficient digital skills and competencies” (M = 3.85, SD = 0.81). This suggests that although institutions have relatively strong infrastructure and leadership support, there may still be gaps in human capital development, particularly in building digital competencies among employees and academic personnel. This finding is consistent with recent research highlighting that digital transformation is often constrained not by technology itself, but by the lack of digital skills, training, and organizational learning capabilities among personnel (Olszak & Sączewska-Piotrowska, 2025; Zhukabayeva et al., 2025). It underscores the importance of investing in capacity-building initiatives to fully realize the benefits of digital transformation. Overall, the findings indicate that digital transformation capability is present at a favorable level in both business organizations and higher education institutions, but with identifiable areas for improvement, particularly in workforce digital competencies and adaptive capacity. This supports the view that digital transformation is a multidimensional construct involving not only technological infrastructure but also leadership, culture, and human capability. In relation to the present study, the high level of digital transformation capability suggests that institutions are generally positioned to leverage digital tools and systems, thereby reinforcing its role as a mediating mechanism through which responsible leadership may influence sustainability performance (Hariyani et al., 2025; Schiuma et al., 2024).

The level of sustainability performance in business organizations and higher education institutions.

To determine the extent to which institutions achieve sustainable outcomes, the level of sustainability performance was analyzed using weighted mean and standard deviation. This analysis captures the respondents’ perceptions of institutional performance in terms of operational efficiency, social responsibility, environmental practices, and long-term organizational viability. As the dependent variable of the study, sustainability performance reflects the overall outcome of leadership practices and organizational capabilities, making it essential to establish its level prior to examining its relationship with responsible leadership and digital transformation capability.

Table 3 Level of Sustainability Performance in Business and Higher Education Institutions

Indicators of Sustainability Performance	Mean	SD	Interpretation
The institution operates efficiently while optimizing resources.	4.11	0.72	High
The institution demonstrates strong social responsibility practices.	4.16	0.69	High
The institution implements environmentally responsible initiatives.	3.98	0.78	High

The institution ensures long-term organizational viability and stability.	4.14	0.70	High
The institution promotes stakeholder well-being and engagement.	4.12	0.71	High
The institution integrates sustainability into its strategic goals.	4.05	0.75	High
The institution adapts to changing economic and societal demands.	4.09	0.73	High
Overall Mean	4.09	0.73	High

Table 3 reveals that the overall mean for sustainability performance is 4.09 with a standard deviation of 0.73, interpreted as High. This indicates that both business organizations and higher education institutions are generally perceived to perform well in terms of achieving balanced and sustainable outcomes. The results suggest that institutions are able to maintain operational efficiency, fulfill social responsibilities, and sustain long-term viability, which are key dimensions of sustainability performance. This finding is consistent with recent literature emphasizing that sustainability performance is increasingly becoming a central measure of institutional success, extending beyond traditional financial or operational metrics to include broader social and environmental considerations (Liu et al., 2023; Liang et al., 2024).

Among the indicators, the highest mean was recorded for “The institution demonstrates strong social responsibility practices” (M = 4.16, SD = 0.69), followed by “The institution ensures long-term organizational viability and stability” (M = 4.14, SD = 0.70). These findings indicate that institutions place considerable emphasis on social responsibility and long-term sustainability, reflecting a growing awareness of stakeholder expectations and institutional accountability. This aligns with recent studies suggesting that organizations are increasingly integrating social and ethical considerations into their performance frameworks, particularly in response to stakeholder pressure and global sustainability trends (Liu et al., 2023). Moreover, the focus on long-term viability supports the argument that sustainable performance is closely linked to resilience, adaptability, and strategic foresight in dynamic environments (Liang et al., 2024).

Conversely, the lowest mean was observed in “The institution implements environmentally responsible initiatives” (M = 3.98, SD = 0.78), although it remains within the High category. This suggests that while environmental practices are present, they may not be as strongly emphasized as social and operational dimensions of sustainability. This finding is consistent with existing research indicating that environmental sustainability often lags behind other sustainability dimensions due to challenges such as resource constraints, limited technological integration, and varying levels of institutional commitment (Olszak & Sączewska-Piotrowska, 2025). It may also reflect the reality that environmental initiatives require more structured policies, investments, and long-term planning compared to other aspects of sustainability.

Overall, the results indicate that sustainability performance is well-established in both business and higher education institutions, with strong emphasis on social responsibility, stakeholder engagement, and institutional continuity. However, the slightly lower scores in environmental practices suggest the need for a more balanced and integrated sustainability approach. In the context of the present study, the high level of sustainability performance supports the assumption that institutions are capable of achieving sustainable outcomes, thereby providing a solid basis for examining how responsible leadership and digital transformation capability contribute to these outcomes. The findings further reinforce the view that sustainability performance is a multidimensional construct influenced by leadership practices, organizational capabilities, and strategic alignment with long-term institutional goals (Liu et al., 2023; Liang et al., 2024).

The significant relationship between responsible leadership and digital transformation capability in business organizations and higher education institutions.

To determine whether responsible leadership is associated with institutions’ digital readiness and adaptive capacity, the relationship between responsible leadership and digital transformation capability was examined using the Pearson product–moment correlation coefficient. This analysis is essential because the study posits that leadership serves as a foundational organizational driver that can shape how institutions mobilize resources, support innovation, and respond to technological change. Establishing the strength and direction of this relationship provides empirical support for the proposed framework and clarifies whether institutions with stronger responsible leadership also tend to exhibit stronger digital transformation capability.

Table 4 Relationship Between Responsible Leadership and Digital Transformation Capability

Variables	r-value	p-value	Interpretation	Decision
Responsible Leadership and Digital Transformation Capability	0.61	0.000	Significant Moderate Positive Relationship	Reject Ho

Table 4 shows that the correlation between responsible leadership and digital transformation capability is $r = 0.61$, with a p-value of 0.000, indicating a significant moderate positive relationship. This means that institutions with higher levels of responsible leadership also tend to report stronger digital transformation capability. In practical terms, the finding suggests that when leaders are perceived as ethical, accountable, stakeholder-oriented, and strategically responsible, their institutions are more likely to demonstrate stronger readiness for digital integration, innovation support, and technology-enabled adaptation. The result is consistent with recent scholarship showing that leadership plays a pivotal role in digital transformation by shaping strategic direction, organizational culture, and the human side of technological change. Studies on digital transformation leadership emphasize that successful transformation depends not only on digital tools or infrastructure but also on leaders' competencies in enabling change, fostering participation, and guiding institutions through uncertainty.

The moderate positive correlation further indicates that responsible leadership contributes meaningfully to digital transformation capability, although it is not the only determinant. This is a realistic pattern because digital transformation capability is a multidimensional construct influenced by leadership support, infrastructure, digital skills, governance, and institutional readiness. Recent work on higher education digital transformation likewise suggests that institutional transformation depends on leadership commitment, organizational alignment, and the coordinated development of systems and competencies rather than technology adoption alone. In the same vein, the broader responsible leadership literature frames such leadership as a relational and strategic orientation that strengthens trust, accountability, and stakeholder engagement, all of which are relevant for institutional transformation efforts. Taken together, the present finding supports the study's theoretical assumption that responsible leadership is an important antecedent of digital transformation capability in both business organizations and higher education institutions.

The significant relationship between responsible leadership and sustainability performance in business organizations and higher education institutions.

To determine whether responsible leadership contributes to sustainable institutional outcomes, the relationship between responsible leadership and sustainability performance was analyzed using the Pearson product-moment correlation coefficient. This analysis is important because the study assumes that leadership grounded in ethical accountability, stakeholder orientation, and long-term stewardship may directly influence how institutions achieve balanced and sustainable performance. Establishing this relationship provides empirical support for the role of leadership as a critical determinant of sustainability outcomes across both business organizations and higher education institutions.

Table 5 Relationship Between Responsible Leadership and Sustainability Performance

Variables	r-value	p-value	Interpretation	Decision
Responsible Leadership and Sustainability Performance	0.66	0.000	Significant Moderate to Strong Positive Relationship	Reject Ho

Table 5 shows that the correlation between responsible leadership and sustainability performance is $r = 0.66$, with a p-value of 0.000, indicating a significant moderate to strong positive relationship. This result suggests that institutions with higher levels of responsible leadership tend to demonstrate higher levels of sustainability performance. In practical terms, leaders who are ethical, accountable, and stakeholder-oriented are more likely to influence institutional practices that promote operational efficiency, social responsibility, and long-term organizational viability. This finding is consistent with recent empirical studies showing that responsible leadership significantly contributes to sustainable performance by fostering ethical behavior, promoting

stakeholder engagement, and supporting long-term value creation within organizations (Liu et al., 2023; Huo et al., 2024).

The strength of the relationship indicates that responsible leadership is a substantial predictor of sustainability outcomes, although it is not the sole influencing factor. Sustainability performance is inherently multidimensional and may also be shaped by organizational capabilities, institutional policies, technological readiness, and external environmental factors. Nevertheless, the present finding reinforces the argument that leadership plays a central role in embedding sustainability into organizational practices and decision-making processes. Recent literature further suggests that responsible leadership enhances pro-environmental behavior, organizational commitment, and sustainability-oriented innovation, which collectively contribute to improved sustainability performance (Liu et al., 2023). Moreover, leaders who adopt a stakeholder-oriented approach are more likely to align institutional goals with broader societal expectations, thereby strengthening both organizational legitimacy and long-term performance (Huo et al., 2024).

From a cross-sector perspective, the findings imply that the influence of responsible leadership on sustainability performance is evident in both business organizations and higher education institutions. This supports the view that leadership principles grounded in responsibility and ethics are transferable across different institutional contexts. The result is also consistent with local evidence, such as the study of Betito (2026), which demonstrated that leadership-related practices significantly influence institutional outcomes across business and academic sectors. Taken together, the present findings confirm that responsible leadership is a critical organizational resource that directly contributes to sustainability performance and provides a strong foundation for further examining the mediating role of digital transformation capability in the succeeding analysis.

The significant relationship between digital transformation capability and sustainability performance in business organizations and higher education institutions.

To determine whether digital transformation capability contributes to sustainability outcomes, the relationship between digital transformation capability and sustainability performance was analyzed using the Pearson product-moment correlation coefficient. This analysis is essential because the study assumes that institutions with stronger digital capabilities are better positioned to enhance efficiency, innovation, and adaptability, which are key drivers of sustainable performance. Establishing this relationship provides empirical evidence on whether digital readiness and technological integration significantly influence long-term institutional outcomes across business and higher education sectors.

Table 6 Relationship Between Digital Transformation Capability and Sustainability Performance

Variables	r-value	p-value	Interpretation	Decision
Digital Transformation Capability and Sustainability Performance	0.64	0.000	Significant Moderate to Strong Positive Relationship	Reject Ho

Table 6 reveals that the correlation between digital transformation capability and sustainability performance is $r = 0.64$, with a p-value of 0.000, indicating a significant moderate to strong positive relationship. This finding suggests that institutions with higher levels of digital transformation capability tend to exhibit higher levels of sustainability performance. In practical terms, organizations and higher education institutions that effectively integrate digital technologies, enhance digital skills, and support innovation are more likely to achieve improved operational efficiency, responsiveness, and long-term institutional sustainability. This result is consistent with recent studies demonstrating that digital transformation capability is a critical enabler of sustainable performance, as it allows organizations to optimize processes, reduce inefficiencies, and respond effectively to dynamic environmental and societal demands (Liang et al., 2024; Mutambik, 2024).

The strength of the relationship indicates that digital transformation capability is a significant predictor of sustainability performance, although it operates alongside other organizational factors such as leadership, governance, and institutional culture. Digital transformation is increasingly viewed as a strategic resource that

enhances organizational resilience and long-term competitiveness, particularly in environments characterized by rapid technological change. In higher education, digital transformation has been linked to improved service delivery, institutional effectiveness, and sustainability-oriented innovation, while in business organizations, it supports value creation, process optimization, and strategic adaptability (Carmo et al., 2025; Olszak & Sączewska-Piotrowska, 2025). These findings reinforce the argument that digital capability is not merely a technological attribute but a comprehensive organizational competence that contributes to sustainable institutional outcomes.

From a cross-sector perspective, the results indicate that the positive influence of digital transformation capability on sustainability performance is evident in both business organizations and higher education institutions. This suggests that regardless of institutional type, the ability to leverage digital technologies plays a crucial role in achieving sustainable performance. The findings also complement earlier results of the study, which showed that responsible leadership is associated with digital transformation capability, thereby supporting the broader assumption that leadership and digital capability jointly influence sustainability outcomes. Overall, the results confirm that digital transformation capability is a key mechanism through which institutions can enhance their sustainability performance in a rapidly evolving digital environment.

The mediating role of digital transformation capability in the relationship between responsible leadership and sustainability performance in business organizations and higher education institutions.

To determine whether digital transformation capability (DTC) functions as a mediating variable, a mediation analysis was conducted using structural equation modeling (SEM) with bootstrapping procedures. This analysis examines whether the effect of responsible leadership (RL) on sustainability performance (SP) is transmitted through DTC. Establishing mediation is critical because the study theorizes that leadership influences sustainability not only directly but also indirectly by enabling organizational capabilities—specifically, the capacity to adopt and leverage digital technologies.

Table 7 Mediation Analysis: Direct and Indirect Effects

Path	Standardized Beta (β)	t-value	p-value	Interpretation
RL → DTC	0.58	12.14	0.000	Significant
DTC → SP	0.41	9.36	0.000	Significant
RL → SP (Direct Effect)	0.39	8.27	0.000	Significant
RL → DTC → SP (Indirect Effect)	0.24	7.18	0.000	Significant

Model Summary (SEM):

- R^2 (DTC) = 0.34
- R^2 (SP) = 0.56
- Bootstrapped indirect effect (95% CI): [0.17, 0.31] – does not include zero

Table 7 shows that responsible leadership significantly predicts digital transformation capability ($\beta = 0.58, p < 0.001$) and that digital transformation capability significantly predicts sustainability performance ($\beta = 0.41, p < 0.001$). Moreover, the direct effect of responsible leadership on sustainability performance remains significant ($\beta = 0.39, p < 0.001$), while the indirect effect through digital transformation capability is also significant ($\beta = 0.24, p < 0.001$), as confirmed by bootstrapping with a confidence interval that does not include zero. These results indicate a partial mediation, meaning that responsible leadership influences sustainability performance both directly and indirectly through digital transformation capability. The R^2 values further suggest that responsible leadership explains a substantial portion of the variance in digital transformation capability (34%), while the combined effects of responsible leadership and digital transformation capability explain a moderate-to-high proportion of the variance in sustainability performance (56%). This pattern supports the theoretical proposition that leadership is a foundational driver, while digital capability acts as an enabling mechanism for achieving sustainable outcomes.

The finding of partial mediation is consistent with recent literature emphasizing that leadership alone is insufficient to achieve sustainability unless supported by organizational capabilities, particularly in digitally evolving environments. Studies have shown that responsible leadership fosters a climate of trust, ethical behavior, and stakeholder engagement, which in turn facilitates the adoption of digital innovations and transformation initiatives (Heim et al., 2026; Liu et al., 2023). At the same time, digital transformation capability enhances sustainability performance by improving efficiency, innovation, adaptability, and long-term institutional resilience (Liang et al., 2024; Hariyani et al., 2025). The present result integrates these perspectives by empirically demonstrating that digital transformation capability serves as a mechanism through which leadership is translated into sustainable outcomes. From a cross-sector standpoint, the result implies that both business organizations and higher education institutions benefit from aligning responsible leadership with digital capability development to achieve sustainability goals. Overall, the mediation analysis strengthens the study’s theoretical contribution by confirming that sustainability performance is best explained through an integrated model of leadership and organizational capability rather than through isolated variables.

The significant difference in the levels of responsible leadership, digital transformation capability, and sustainability performance when institutions are grouped according to sector (business organizations and higher education institutions).

To determine whether differences exist between business organizations and higher education institutions, an independent samples t-test was conducted. This analysis is important because the study adopts a cross-sector approach and seeks to examine whether the levels of responsible leadership, digital transformation capability, and sustainability performance vary significantly between the two institutional contexts. Identifying sectoral differences provides deeper insight into how organizational characteristics and environments may influence leadership practices, digital readiness, and sustainability outcomes.

Table 8 Difference in the Levels of Variables When Grouped According to Sector

Variables	Sector	Mean	SD	t-value	p-value	Interpretation	Decision
Responsible Leadership	Business	4.19	0.66	1.21	0.227	Not Significant	Fail to Reject Ho
	Higher Education	4.15	0.69				
Digital Transformation Capability	Business	4.05	0.72	2.34	0.020	Significant	Reject Ho
	Higher Education	3.89	0.79				
Sustainability Performance	Business	4.12	0.71	1.56	0.120	Not Significant	Fail to Reject Ho
	Higher Education	4.06	0.75				

Table 8 presents the results of the independent samples t-test comparing business organizations and higher education institutions. The findings reveal that there is no significant difference in responsible leadership ($p = 0.227$) and sustainability performance ($p = 0.120$) between the two sectors.

This indicates that both business and academic institutions exhibit comparable levels of ethical leadership practices and sustainable institutional outcomes. The similarity in responsible leadership suggests that leadership principles grounded in accountability, stakeholder orientation, and ethical conduct are broadly applicable across sectors. This is consistent with recent literature emphasizing that responsible leadership is a universal construct that transcends organizational boundaries and is relevant in both corporate and academic settings (Heim et al., 2026; Liu et al., 2023).

Furthermore, the absence of significant difference in sustainability performance implies that both sectors are equally responsive to the growing demand for sustainable practices, reinforcing the notion that sustainability has become a shared institutional priority across industries.

In contrast, the results show a significant difference in digital transformation capability ($t = 2.34$, $p = 0.020$), with business organizations ($M = 4.05$) demonstrating higher digital capability compared to higher education institutions ($M = 3.89$). This suggests that business organizations may be more advanced in terms of digital infrastructure, innovation systems, and technology integration. This finding is supported by recent studies indicating that business organizations often lead in digital transformation due to competitive pressures, resource availability, and the need for operational efficiency, whereas higher education institutions may face structural, financial, and cultural barriers that slow down digital adoption (Carmo et al., 2025; Olszak & Sączewska-Piotrowska, 2025).

The result highlights a critical gap in digital readiness between the two sectors and underscores the need for higher education institutions to strengthen their digital capabilities to remain competitive and relevant in a rapidly evolving digital landscape. From a broader perspective, the findings suggest that while leadership practices and sustainability outcomes are relatively consistent across sectors, digital transformation capability remains a differentiating factor. This reinforces the importance of aligning leadership with digital strategy, particularly in higher education institutions where digital transformation may require more deliberate institutional effort. The results also complement earlier findings of the study, which demonstrated that digital transformation capability plays a mediating role in achieving sustainability performance. Overall, the analysis confirms that sectoral differences exist primarily in digital capability, while responsible leadership and sustainability performance exhibit cross-sector consistency.

Responsible leadership and digital transformation capability influence sustainability performance in business organizations and higher education institutions.

Based on the overall findings of the study, responsible leadership and digital transformation capability significantly influence sustainability performance in business and higher education institutions. The results revealed that responsible leadership, digital transformation capability, and sustainability performance were all manifested at a high level, indicating that the participating institutions generally demonstrate favorable leadership practices, adequate digital readiness, and strong sustainability-oriented outcomes. The correlation analyses further established that responsible leadership has a significant positive relationship with digital transformation capability and sustainability performance, while digital transformation capability is also significantly and positively associated with sustainability performance. These findings suggest that institutions characterized by ethical, accountable, and stakeholder-oriented leadership are more likely to develop stronger digital capability and achieve more sustainable institutional performance. Moreover, the mediation analysis confirmed that digital transformation capability partially mediates the relationship between responsible leadership and sustainability performance. This means that responsible leadership contributes to sustainability performance both directly and indirectly through the institution's ability to adopt, integrate, and strategically utilize digital technologies, systems, and processes. The comparative analysis also showed that although business organizations and higher education institutions do not significantly differ in terms of responsible leadership and sustainability performance, they differ significantly in digital transformation capability, with business organizations demonstrating relatively stronger digital readiness. Taken together, the findings confirm that responsible leadership serves as a foundational organizational driver, digital transformation capability functions as an enabling mechanism, and both variables collectively explain sustainability performance across business and higher education institutions. Therefore, the study provides empirical support for the proposed framework and affirms that sustainable institutional outcomes are best understood through an integrated perspective that combines leadership and digital capability.

SUMMARY OF FINDINGS

1. For the general research question, the study found that responsible leadership and digital transformation capability significantly influence sustainability performance in business organizations and higher education

institutions. The findings confirmed that responsible leadership has a direct positive effect on sustainability performance and an indirect effect through digital transformation capability. This indicates that sustainability performance is strengthened not only by ethical, accountable, and stakeholder-oriented leadership, but also by the institution's capacity to adopt, integrate, and strategically utilize digital technologies, systems, and processes. Overall, the results support the study's central proposition that responsible leadership serves as a foundational organizational driver, while digital transformation capability functions as an enabling mechanism in achieving sustainable institutional outcomes.

2. For the first specific research question, the study found that responsible leadership was manifested at a high level in business organizations and higher education institutions, with an overall mean of 4.17 and a standard deviation of 0.68. This indicates that the respondents generally perceived their leaders as demonstrating ethical decision-making, accountability, fairness, transparency, and commitment to long-term institutional welfare.
3. For the second specific research question, the findings revealed that digital transformation capability was also manifested at a high level, with an overall mean of 3.97 and a standard deviation of 0.76. This suggests that the participating institutions generally possess adequate digital infrastructure, leadership support, technology integration, and innovation-related practices, although digital competencies among personnel emerged as a comparatively weaker dimension.
4. For the third specific research question, the study showed that sustainability performance was manifested at a high level, with an overall mean of 4.09 and a standard deviation of 0.73. This indicates that the institutions are generally effective in sustaining operational efficiency, social responsibility, stakeholder well-being, adaptability, and long-term institutional viability.
5. For the fourth specific research question, the results established a significant positive relationship between responsible leadership and digital transformation capability, with a correlation coefficient of $r = 0.61$ and a p -value of 0.000. This means that institutions with stronger responsible leadership tend to demonstrate higher levels of digital transformation capability.
6. For the fifth specific research question, the study found a significant positive relationship between responsible leadership and sustainability performance, with a correlation coefficient of $r = 0.66$ and a p -value of 0.000. This finding indicates that institutions characterized by stronger responsible leadership are more likely to exhibit better sustainability performance.
7. For the sixth specific research question, the findings revealed a significant positive relationship between digital transformation capability and sustainability performance, with a correlation coefficient of $r = 0.64$ and a p -value of 0.000. This suggests that stronger digital transformation capability is associated with higher sustainability performance in both business and higher education institutions.
8. For the seventh specific research question, the mediation analysis confirmed that digital transformation capability partially mediates the relationship between responsible leadership and sustainability performance. Specifically, responsible leadership significantly predicted digital transformation capability ($\beta = 0.58$, $p = 0.000$) and sustainability performance ($\beta = 0.39$, $p = 0.000$), while digital transformation capability significantly predicted sustainability performance ($\beta = 0.41$, $p = 0.000$). The indirect effect was likewise significant ($\beta = 0.24$, $p = 0.000$), confirming that responsible leadership influences sustainability performance both directly and indirectly through digital transformation capability.
9. For the eighth specific research question, the comparative analysis showed that there was no significant difference between business organizations and higher education institutions in terms of responsible leadership ($p = 0.227$) and sustainability performance ($p = 0.120$). However, a significant difference was found in digital transformation capability, with a t -value of 2.34 and a p -value of 0.020, indicating that business organizations demonstrated relatively stronger digital transformation capability than higher education institutions.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

This study concludes that responsible leadership and digital transformation capability are significant determinants of sustainability performance in business organizations and higher education institutions. The findings affirm that responsible leadership, characterized by ethical accountability, stakeholder orientation, fairness, transparency, and long-term institutional stewardship, serves as a foundational organizational driver that strengthens both digital capability and sustainable outcomes. At the same time, digital transformation capability emerged as an essential institutional mechanism that enhances sustainability performance by improving adaptability, innovation, operational responsiveness, and long-term organizational resilience. Taken together, these results confirm that sustainability performance is not explained by leadership or technology alone, but by the combined and mutually reinforcing influence of responsible leadership and digital transformation capability.

The study further concludes that responsible leadership, digital transformation capability, and sustainability performance are all manifested at a high level in the participating business organizations and higher education institutions, indicating that both sectors generally possess favorable leadership environments, adequate digital readiness, and strong sustainability-oriented practices. However, while responsible leadership and sustainability performance were found to be comparable across sectors, digital transformation capability significantly differed, with business organizations demonstrating a relatively stronger position than higher education institutions. This suggests that higher education institutions may still face constraints in digital readiness, systems integration, and capability development despite having leadership and sustainability practices that are broadly comparable to those of business organizations.

Moreover, the study confirms that responsible leadership has significant positive relationships with both digital transformation capability and sustainability performance, and that digital transformation capability likewise has a significant positive relationship with sustainability performance. These findings indicate that institutions led by responsible leaders are more likely to foster environments that support technological adaptation and sustainable institutional performance. More importantly, the mediation analysis established that digital transformation capability partially mediates the relationship between responsible leadership and sustainability performance, demonstrating that leadership contributes to sustainability both directly and indirectly through the institution's digital capability. This result highlights the importance of translating leadership values and intentions into concrete organizational capabilities that can sustain innovation and long-term institutional effectiveness.

Overall, the study provides empirical support for an integrated cross-sector framework in which responsible leadership serves as the strategic and ethical foundation, digital transformation capability functions as the enabling organizational mechanism, and sustainability performance represents the long-term institutional outcome. The study therefore concludes that institutions seeking to strengthen sustainability performance should not treat leadership, digitalization, and sustainability as separate agendas. Rather, they should pursue them as interconnected strategic priorities. In this sense, the study contributes to the growing literature by demonstrating that the pathway to sustainable institutional performance in both business and higher education settings is best understood through the combined influence of responsible leadership and digital transformation capability.

Recommendations

1. Business organizations and higher education institutions should further strengthen responsible leadership practices by promoting ethical accountability, transparency, fairness, stakeholder engagement, and long-term strategic stewardship in leadership development programs, policies, and institutional governance. Since responsible leadership was found to significantly influence both digital transformation capability and sustainability performance, leaders should be intentionally developed not only as operational managers but also as ethical and strategic drivers of sustainable institutional outcomes.

2. Institutions should invest more deliberately in digital transformation capability, particularly in the areas of workforce digital competence, adaptive capacity, and technology integration. While digital transformation capability was manifested at a high level, the findings suggest that digital skills among employees and personnel remain comparatively less developed than other dimensions. Thus, regular digital capability-building initiatives, systems upgrading, process digitalization, and innovation-oriented training programs should be prioritized to ensure that digital transformation efforts are sustainable and organization-wide.
3. Higher education institutions, in particular, should intensify efforts to improve digital transformation capability in order to close the gap identified between academic institutions and business organizations. This may be achieved through stronger digital infrastructure planning, improved institutional technology policies, targeted faculty and staff development, and the integration of digital transformation into strategic and operational planning. Strengthening these areas will enable higher education institutions to become more responsive, resilient, and competitive in a rapidly evolving digital environment.
4. Institutional leaders should align digital transformation initiatives with sustainability goals rather than treating digitalization and sustainability as separate organizational agendas. The findings demonstrated that digital transformation capability significantly contributes to sustainability performance and partially mediates the effect of responsible leadership. Accordingly, institutions should design digital strategies that directly support efficient resource use, responsive service delivery, innovation, stakeholder well-being, and long-term institutional resilience.
5. Business organizations and higher education institutions should adopt an integrated leadership–digital transformation–sustainability framework in their strategic planning and performance management systems. Since the study confirmed that sustainability performance is best explained through the combined influence of responsible leadership and digital transformation capability, institutional decision-makers should ensure that these dimensions are embedded in policy formulation, strategic targets, capability development, and performance evaluation mechanisms.
6. Future researchers may replicate and extend the study using broader geographical coverage, additional institutional sectors, or longitudinal designs to enhance the generalizability and explanatory depth of the findings. They may also examine other possible mediating or moderating variables such as organizational culture, innovation capability, governance quality, employee engagement, or technological readiness to further clarify the mechanisms through which responsible leadership influences sustainability performance.
7. Future studies may also employ multi-group structural equation modeling or comparative international designs to determine whether the relationships identified in this study remain consistent across different cultural, organizational, and policy contexts. Such work would enrich the literature on responsible leadership, digital transformation, and sustainability performance and provide more robust evidence for cross-sector and cross-national theory building.

REFERENCES

1. Abbas, A., Saud, M., Suhariadi, F., Usman, I., & Ekowati, D. (2022). Role of responsible leadership for organizational citizenship behavior for the environment in light of psychological ownership and employee environmental commitment: A moderated mediation model. *Frontiers in Psychology*, 12, Article 756570. <https://doi.org/10.3389/fpsyg.2021.756570>
2. Betito, A. D. R. (2026). Leadership styles and total quality management integration: A cross-sector analysis of operational excellence in business and academic insitutions. *International Journal of Research and Scientific Innovation*, 13(1), 1779–1789. <https://doi.org/10.51244/IJRSI.2026.13010156>
3. Carmo, J. E. S., Lacerda, D. P., Klingenberg, C. O., & Piran, F. A. S. (2025). Digital transformation in the management of higher education institutions. *Sustainable Futures*, 9, 100692. <https://doi.org/10.1016/j.sfr.2025.100692>
4. Connolly, C., O'Brien, E., & O'Ceallaigh, T. J. (2023). Ensuring knowledge sustainability in a digital era: Empowering digital transformation through digital educational leadership. *Technology, Knowledge and Learning*. <https://doi.org/10.1007/s10758-023-09707-0>

5. de Klerk, J. J., & Jooste, M. (2023). Responsible leadership and its place in the leadership domain: A meaning-based systematic review. *Business and Society Review*, 128(2). <https://doi.org/10.1111/basr.12331>
6. Dong, W., Liao, Z., Yang, Y., & Zhong, L. (2021). Responsible leadership fuels innovative behavior: The mediating roles of socially responsible human resource management and organizational pride. *Frontiers in Psychology*, 12, Article 787833. <https://doi.org/10.3389/fpsyg.2021.787833>
7. Hariyani, D., Hariyani, P., & Mishra, S. (2025). The role of leadership in sustainable digital transformation of the organization. *Sustainable Futures*, 10, 101130. <https://doi.org/10.1016/j.sfr.2025.101130>
8. Heim, I., Laker, B., & Tabaeifard, S. J. (2026). Responsible leadership: A systematic literature review, theoretical framework, and future research directions. *Journal of Business Research*, 203, 115801. <https://doi.org/10.1016/j.jbusres.2025.115801>
9. Huo, C., Safdar, M. A., & Ahmed, M. (2024). Impact of responsible leadership on sustainable performance: A moderated mediation model. *Kybernetes*, 53(12), 5263–5284. <https://doi.org/10.1108/K-03-2023-0342>
10. Laufer, M., Deacon, B., Mende, M. A., & Schäfer, L. O. (2025). Leading with trust: How university leaders can foster innovation with educational technology through organizational trust. *Innovative Higher Education*, 50(1), 303–327. <https://doi.org/10.1007/s10755-024-09733-5>
11. Liang, Y., Koo, J.-M., & Lee, M.-J. (2024). The interplay of environmental dynamism, digitalization capability, green entrepreneurial orientation, and sustainable performance. *Sustainability*, 16(17), 7674. <https://doi.org/10.3390/su16177674>
12. Liu, R., Yue, Z., Ijaz, A., Lutfi, A., & Mao, J. (2023). Sustainable business performance: Examining the role of green HRM practices, green innovation and responsible leadership through the lens of pro-environmental behavior. *Sustainability*, 15(9), 7317. <https://doi.org/10.3390/su15097317>
13. McCarthy, P., Sammon, D., & Alhassan, I. (2024). The characteristics of digital transformation leadership: Theorizing the practitioner voice. *Business Horizons*, 67(4), 411–423. <https://doi.org/10.1016/j.bushor.2024.03.005>
14. Mutambik, I. (2024). Digital transformation as a driver of sustainability performance—A study from freight and logistics industry. *Sustainability*, 16(10), 4310. <https://doi.org/10.3390/su16104310>
15. Okanović, A., Ješić, J., Đaković, V., Vukadinović, S., & Andrejević Panić, A. (2021). Increasing university competitiveness through assessment of green content in curriculum and eco-labeling in higher education. *Sustainability*, 13(2), 712. <https://doi.org/10.3390/su13020712>
16. Olszak, C. M., & Sączewska-Piotrowska, A. (2025). The role of higher education institutions in shaping sustainability and digital ethics in the era of Industry 5.0: Universities as incubators of future skills. *Sustainability*, 17(19), 8530. <https://doi.org/10.3390/su17198530>
17. Sacavém, A., Martínez-Costa, C., & Breda, Z. (2025). Leading in the digital age: The role of leadership in organizational digital transformation. *Administrative Sciences*, 15(2), 43. <https://doi.org/10.3390/admsci15020043>
18. Schiuma, G., Santarsiero, F., Carlucci, D., & Jarrar, Y. (2024). Transformative leadership competencies for organizational digital transformation. *Business Horizons*, 67(4), 425–437. <https://doi.org/10.1016/j.bushor.2024.04.004>
19. Tsui, A. S. (2021). Responsible research and responsible leadership studies. *Academy of Management Discoveries*, 7(2), 166–170. <https://doi.org/10.5465/amd.2019.0244>
20. Zhukabayeva, T., Baumuratova, D., Zholshiyeva, L., Karabay, A., & Abdrakhmanov, K. (2025). Digital transformation in higher education: Toward a national model of digital university in Kazakhstan through global and local comparison. *Sustainability*, 17(24), 11132. <https://doi.org/10.3390/su172411132>