

## Article

# The Leadership Roles and Institutional Readiness on the Implementation of Educational Technology Policies

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**Abstract:** This study comprehensively explored the critical link between transformational leadership paradigms and institutional readiness concerning the implementation of educational technology (EdTech) policies within a higher education institution. Employing a rigorous descriptive-correlational research design, the investigation gathered quantitative data from a diverse cohort of 120 academic and administrative respondents. The empirical findings demonstrated that both transformational leadership and institutional readiness were generally perceived and rated as "Implemented." Specifically, leadership exhibited the strongest manifestation in intellectual stimulation and the weakest in idealized influence. Conversely, institutional readiness was most robust in organizational culture and motivation, while notably deficient in technical skills. Demographic analyses revealed that variables such as sex and age exerted no significant effect on these perceptions; however, educational attainment and length of institutional service generated substantial perception gaps among the respondents. Furthermore, the majority of correlations between leadership dimensions and readiness factors were found to be weak. Nevertheless, three significant relationships emerged: idealized influence was negatively related to resource allocation, intellectual stimulation was negatively associated with technical skills, and individualized consideration demonstrated a positive correlation with institutional motivation. The study concludes that the overall institutional capacity for digital integration remains moderate. Consequently, it strongly recommends enhancing leadership visibility, providing differentiated professional training, upgrading digital skills, and ensuring strategic alignment to foster sustainable digital transformation.

**Keywords:** transformational leadership; institutional readiness; educational technology; digital transformation; vocational education

## 1. Introduction

In the era of rapid digital transformation, higher education institutions increasingly rely on coherent educational technology policies to guide the integration of digital tools into teaching, learning, and administrative practices. However, the effectiveness of policy implementation remains uneven across institutions and regions, largely depending on the interaction between leadership practices and institutional readiness. Transformational leadership has been widely recognized as a key driver of organizational change, particularly in fostering innovation, shared vision, and support for technology adoption. At the same time, institutional readiness—reflected in the availability of resources, organizational culture, staff skills, and motivational climate—plays a decisive role in determining whether educational technology policies can be effectively translated into practice. Existing studies have often examined these factors separately, while relatively few have integrated leadership and readiness within the formal context of policy implementation in higher education [1].

Recent studies provide important support for this perspective. A study grounded in complexity leadership theory and organizational trust, based on interviews with 68 staff members from 8 European programs, found that trust-based leadership characterized by

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flat hierarchies and shared decision-making significantly enhanced staff intrinsic motivation for educational technology innovation. However, the study also emphasized that trust alone was insufficient, as the absence of institutional support such as infrastructure and funding could weaken staff engagement and inhibit innovation. Similarly, a quantitative study involving 509 teachers in Lebanon revealed that the work environment had a strong positive effect on performance, while transformational leadership showed no statistically significant direct effect under crisis conditions, suggesting that contextual and institutional factors may moderate leadership effectiveness. These findings highlight the need for a more integrated framework that considers both leadership roles and institutional preparedness in educational technology policy implementation.

Against this background, the present study focuses on Gongqing Institute of Science and Technology (GIST), a full-time private higher vocational college in Jiangxi Province, China [2]. As an institution with distinctive strengths in engineering and maritime education, GIST is currently facing the broader challenges and opportunities brought by the digital transformation of higher education, including remote learning, blended teaching, artificial intelligence integration, and smart educational governance. In this context, leadership roles such as idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration may significantly affect how educational technology policies are implemented. Meanwhile, institutional readiness in terms of resources, culture, skills, and motivation is equally essential for successful policy execution and long-term sustainability.

This study is theoretically anchored in Transformational Leadership Theory, the Technology Acceptance Model, and Organizational Readiness for Change Theory. These theoretical foundations provide a comprehensive lens for examining how leadership behaviors influence staff attitudes toward technology and how institutional conditions support or constrain policy implementation. Specifically, transformational leadership explains how leaders inspire and guide organizational members toward innovation and change, the Technology Acceptance Model helps explain staff perceptions of usefulness and ease of use in educational technology adoption, and organizational readiness theory emphasizes the collective psychological and structural conditions necessary for effective change [3].

Based on this framework, the study examines the demographic profile of respondents in terms of age, gender, highest educational attainment, and years of work experience; assesses their perceptions of leadership roles and institutional readiness in the implementation of educational technology policies; determines whether significant differences exist when respondents are grouped according to profile variables; and explores the relationship between leadership roles and institutional readiness. Ultimately, the study aims to provide evidence-based inputs for enhancing educational technology policy implementation at GIST [4].

The null hypotheses of the study posit that there are no significant differences in respondents' assessments of leadership roles and institutional readiness when grouped according to demographic factors, and that no significant relationship exists between leadership roles and institutional readiness [5]. The significance of this study lies in its contribution to educational leadership practice, institutional digital transformation, and policy development. For administrators and educational leaders, the findings may provide practical guidance for strengthening transformational leadership competencies and promoting a supportive digital culture. For higher education institutions, the study may help identify gaps in resources, skills, and organizational readiness. Academically, it contributes to the existing literature on educational leadership and educational technology policy implementation, particularly within the context of higher education institutions in China and similar developing educational environments. To provide a clearer understanding of the relationships among the study variables and the proposed policy enhancement framework, the conceptual research paradigm is illustrated in Figure 1.

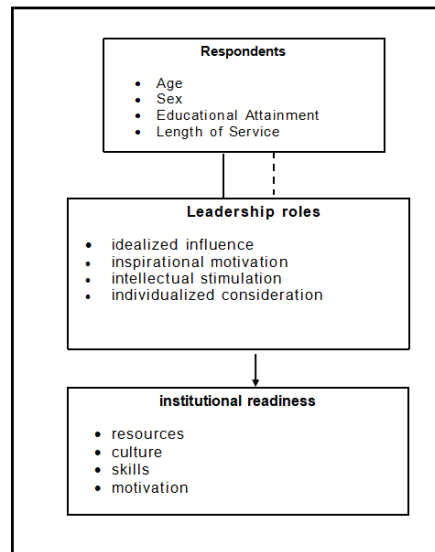


Figure 1. Research Paradigm

## 2. Methodology

This study employed an evaluation survey research design. Evaluation research is appropriate for identifying the purpose of a survey and answering questions related to variables of interest [6]. The primary objective of this study was to assess faculty members' evaluations of leadership roles in the implementation of educational technology policies, particularly in terms of idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration, as well as institutional readiness in terms of resources, culture, skills, and motivation. In line with this objective, the study adopted a quantitative descriptive research design, which is suitable for describing respondents' attitudes, perceptions, and behaviors at a specific point in time through numerical data collected from a relatively large sample.

The study was conducted at Gongqing Institute of Science and Technology (GIST), located in Gongqing City, China. A total of 120 faculty members were selected as respondents to participate in the study [3]. These respondents served as the primary source of data regarding their perceptions of leadership roles and institutional readiness in the implementation of educational technology policies within the institution.

For data collection, a self-constructed questionnaire was developed by the researcher under the guidance of the adviser [7]. The questionnaire was designed to assess respondents' perceptions of leadership roles in the implementation of educational technology policies in terms of idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. Likewise, it included items measuring institutional readiness in terms of resources, organizational culture, skills, and motivation. A four-point Likert scale was used to measure the degree of respondents' agreement with each statement, as presented in Table 1.

Table 1. Rating Scale Used in the Study

Scale	Range	Degree
4	3.51-4.00	Strongly Agree (SA)
3	2.51-3.50	Agree (A)
2	1.51-2.50	Disagree (DA)
1	1.00-1.50	Strongly Disagree (SD)

In the data collection process, the researcher first prepared and submitted a formal letter to the head of Gongqing Institute of Science and Technology (GIST) requesting permission to conduct the study. Approval from the relevant authorities and personnel in

charge was obtained prior to the administration of the questionnaire. After securing the necessary approval, the questionnaires were distributed to the selected faculty respondents for completion [8].

For data analysis, descriptive statistics were used to summarize respondents' assessments of leadership roles and institutional readiness. In addition, Pearson's  $r$  correlation coefficient was employed to determine the relationship between faculty respondents' assessments of leadership roles and institutional readiness in the implementation of educational technology policies.

Throughout the conduct of the study, strict adherence to ethical guidelines was observed. Informed consent was secured from each participant before completion of the questionnaire. Measures to ensure anonymity and confidentiality were strictly implemented so that individual identities could not be traced in the final report. All collected data were securely stored and made accessible only to the researcher and authorized personnel. Furthermore, participants were informed of their right to withdraw from the study at any point without any negative consequences [7]. These ethical precautions were undertaken to protect the welfare of respondents and to uphold the integrity and credibility of the research process.

### 3. Results and Analysis

#### 3.1. Demographic Profile of Respondents

The demographic characteristics of 120 respondents are presented in Table 2.

**Table 2.** Respondents' Demographic Profile (N = 120)

Variable	Category	Frequency	Percentage
Age	Below 20 years old	21	17.5%
	20–30 years old	37	30.8%
	31–40 years old	27	22.5%
	41–50 years old	12	10.0%
	51 years old and above	23	19.2%
Sex	Male	70	58.3%
	Female	50	41.7%
Educational Attainment	Vocational Degree	38	31.7%
	Bachelor's Degree	26	21.7%
	Master's Degree	33	27.5%
Length of Service	Doctorate Degree	23	19.2%
	Below 5 years	28	23.3%
	5-10 years	43	35.8%
	11–15 years	29	24.2%
	Above 15 years	20	16.7%
Total: 120			

Overall, the demographic composition presents a fairly heterogeneous sample, with noticeable peaks in the 20–30 age group, male respondents, vocational and master's level educational attainment, and those with 5–10 years of service. The similarity in frequency between doctorate and bachelor's degree holders (23 vs 26) and between short- and mid-length service brackets (28 vs. 29) underscores a balanced distribution across education and experience levels. A key observation is the underrepresentation of the 41–50 age group and those with over 15 years of service, which might reflect organizational or sectoral shifts that merit further exploration. These insights provide a credible foundation

for interpreting trends in the respondents' perceptions and behaviors in subsequent sections of the study.

3.2. Differences in Leadership Role Evaluation Based on Personal Characteristics

Table 3 reflects the respondents' perceptions of institutional leaders' idealized influence in the implementation of educational technology policies. The overall weighted mean is 3.05 with a standard deviation of 0.36, categorized under "Agree -- Implemented." This suggests that, in general, leaders demonstrate commendable moral authority, ethical guidance, and a sense of purpose in EdTech adoption. However, the interpretation also implies moderate rather than outstanding performance in this domain, pointing to areas where influence could be strengthened [9].

**Table 3.** Assessment of Respondents on the Leadership Roles in the Implementation of Educational Technology Policies in terms of Idealized influence

Indicator	WM	SD	QD	VI
Our institutional leaders serve as role models by consistently demonstrating a strong commitment to the integration of educational technology	2.88	0.90	Agree	Implemented
The leadership communicates a clear vision of digital transformation that aligns with the values and goals of the institution	3.13	0.69	Agree	Implemented
Leaders act with integrity and fairness in making decisions related to educational technology policy implementation	3.05	0.87	Agree	Implemented
Institutional leaders inspire trust and confidence among faculty and staff in advancing the use of educational technologies	2.88	0.84	Agree	Implemented
Our leaders display a strong sense of purpose and conviction when promoting innovation through educational technology	3.05	0.87	Agree	Implemented
The leadership demonstrates ethical behavior in managing technology-related resources and policy decisions	3.28	0.72	Agree	Implemented
Faculty and staff look up to our leaders	3.08	0.69	Agree	Implemented
Overall Mean	3.05	0.36	Agree	Implemented

Legend: 3.51 -- 4.00 (Strongly Agree-Highly Implemented); 2.51 -- 3.50 (Agree-Implemented); 1.51 - - 2.50 (Disagree-Slightly Implemented); 1.0-1.50 (Strongly Disagree-Not Implemented).

Table 4 presents how respondents assessed the leadership roles related to inspirational motivation. The overall mean score is 3.16 (SD = 0.29), indicating that respondents "Agree" that inspirational leadership is implemented. This subdomain of transformational leadership focuses on leaders' ability to articulate a compelling vision, stimulate enthusiasm, and foster team engagement toward a shared EdTech goal. Among the four domains, this is moderately strong, though not as highly rated as intellectual stimulation [6].

**Table 4.** Assessment of Respondents on the Leadership Roles in the Implementation of Educational Technology Policies in terms of Inspirational Motivation

Indicator	WM	SD	QD	VI
Leaders effectively communicate the importance of educational technology in improving teaching and learning outcomes	3.3	0.76	Agree	Implemented
Our institutional leaders inspire enthusiasm and commitment among staff toward digital transformation	3.52	0.62	Strongly Agree	Highly Implemented
Leaders encourage collective participation in achieving the goals outlined in the educational technology policies	3.48	0.65	Agree	Implemented
Leadership consistently provides a positive outlook on the future of technology integration in the institution	3.04	0.74	Agree	Implemented
The vision for educational technology is communicated in a way that motivates faculty and staff to actively engage	3.13	0.71	Agree	Implemented
Leaders express confidence in the institution's capacity to adapt to and sustain digital change	2.93	0.86	Agree	Implemented
Faculty and staff are inspired by the passion and energy leaders show in advancing EdTech initiatives	2.87	0.76	Agree	Implemented
Overall Mean	3.16	0.29	Agree	Implemented

Legend: 3.51 -- 4.00 (Strongly Agree-Highly Implemented); 2.51 -- 3.50 (Agree-Implemented); 1.51 - 2.50 (Disagree-Slightly Implemented); 1.0-1.50 (Strongly Disagree-Not Implemented).

Table 5 showcases the highest overall mean among the four leadership dimensions, with intellectual stimulation rated at 3.31 (SD = 0.34). This finding underscores the strength of leadership in fostering an environment that values critical thinking, innovation, and open inquiry related to educational technology. Respondents "Agree" that their leaders effectively stimulate intellectual engagement, making this domain a central pillar of perceived leadership efficacy [10].

**Table 5.** Assessment of Respondents on the Leadership Roles in the Implementation of Educational Technology Policies in terms of Intellectual stimulation

Indicator	WM	SD	QD	VI
Leaders challenge traditional methods and encourage the exploration of new technology-driven teaching strategies	3.36	0.78	Agree	Implemented
Our leaders support experimentation and accept that failure is part of the innovation process	3.04	0.74	Agree	Implemented

Leadership promotes critical thinking when addressing challenges in implementing educational technology	3.45	0.73	Agree	Implemented
Faculty and staff are encouraged to contribute innovative ideas for EdTech policy enhancement	3.27	0.83	Agree	Implemented
Leaders ask thought-provoking questions that lead to deeper understanding and improved practices	3.33	0.84	Agree	Implemented
Our institution's leaders create opportunities for academic dialogue on digital learning innovations	3.36	0.83	Agree	Implemented
Leaders promote continuous learning and improvement in the use of emerging educational technologies	3.34	0.74	Agree	Implemented
Overall Mean	3.31	0.34	Agree	Implemented

Legend: 3.51 -- 4.00 (Strongly Agree-Highly Implemented); 2.51 -- 3.50 (Agree-Implemented); 1.51 - 2.50 (Disagree-Slightly Implemented); 1.0-1.50 (Strongly Disagree-Not Implemented).

Table 6 illustrates how respondents assessed leadership in terms of individualized consideration, which involves attending to the unique needs, strengths, and circumstances of faculty and staff in EdTech implementation. The overall weighted mean is 3.25 with a standard deviation of 0.34, indicating that such practices are positively implemented across the institution [11]. While slightly lower than intellectual stimulation, this score demonstrates a well-regarded degree of personal support and development facilitation.

**Table 6.** Assessment of Respondents on the Leadership Roles in the Implementation of Educational Technology Policies in terms of Individualized Consideration

Indicator	WM	SD	QD	VI
Leaders provide personalized support and coaching in the use of educational technologies	3.01	0.89	Agree	Implemented
Faculty and staff feel that their unique needs and concerns about technology use are heard and addressed	3.36	0.83	Agree	Implemented
Leadership identifies and nurtures individual strengths in digital pedagogy and technology application	3.33	0.82	Agree	Implemented
Leaders ensure access to training and development programs tailored to different levels of digital proficiency	3.31	0.9	Agree	Implemented
One-on-one mentoring or guidance is offered by leaders to support staff in adapting to new technologies	3.29	0.69	Agree	Implemented

Leaders recognize and appreciate the efforts of individuals who contribute to successful EdTech implementation	3.27	0.83	Agree	Implemented
Institutional leaders are approachable and open to providing feedback or assistance on tech-related matters	3.18	0.85	Agree	Implemented
Overall Mean	3.25	0.34	Agree	Implemented

Legend: 3.51 -- 4.00 (Strongly Agree-Highly Implemented); 2.51 -- 3.50 (Agree-Implemented); 1.51 - - 2.50 (Disagree-Slightly Implemented); 1.0-1.50 (Strongly Disagree-Not Implemented).

Table 7 consolidates all four domains of transformational leadership, with an overall mean of 3.19 (SD = 0.21), indicating that leadership roles in the implementation of educational technology policies are generally perceived as "Implemented." Intellectual Stimulation received the highest rating (3.31), followed by Individualized Consideration (3.25), Inspirational Motivation (3.16), and Idealized Influence (3.05). The relatively small standard deviations suggest stable and consistent perceptions across respondents.

**Table 7.** Summary Table on the Assessment of Respondents on the Leadership Roles in the Implementation of Educational Technology Policies

Indicator	WM	SD	QD	VI
Idealized Influence	3.05	0.36	Agree	Implemented
Inspirational Motivation	3.16	0.29	Agree	Implemented
Intellectual Stimulation	3.31	0.34	Agree	Implemented
Individualized Consideration	3.25	0.34	Agree	Implemented
Overall Mean	3.19	0.21	Agree	Implemented

Legend: 3.51 -- 4.00 (Strongly Agree-Highly Implemented); 2.51 -- 3.50 (Agree-Implemented); 1.51 - - 2.50 (Disagree-Slightly Implemented); 1.0-1.50 (Strongly Disagree-Not Implemented).

*3.3. Evaluation of Leadership Roles: Idealized Influence, Inspirational Motivation, Intellectual Stimulation, and Individualized Consideration*

Table 8 presents the comparative assessment of respondents on leadership roles in the implementation of educational technology policies according to their sex. Across all indicators—idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration—no statistically significant differences were observed between male and female respondents. The p-values for all domains were well above the 0.05 threshold, with idealized influence at p = 0.824, inspirational motivation at p = 0.273, intellectual stimulation at p = 0.717, individualized consideration at p = 0.423, and the overall mean difference at p = 0.789. Thus, the null hypothesis was accepted in each case.

**Table 8.** Differences in the Assessment of Respondents on the Leadership Roles in the Implementation of Educational Technology Policies in Terms of Sex

Indicator	Sex	Mean	t	Sig.	Decision on Ho	Interpretation
Idealized Influence	Male	3.02	0.050	0.824	Accepted	Not Significant
	Female	3.09				

Inspirational	Male	3.16	1.213	0.273	Accepted	Not
Motivation	Female	3.16				Significant
Intellectual	Male	3.27	0.132	0.717	Accepted	Not
Stimulation	Female	3.36				Significant
Individualized	Male	3.23	0.645	0.423	Accepted	Not
	Female	3.27				Significant
Consideration						
Overall	Male	3.17	0.072	0.789	Accepted	Not
	Female	3.22				Significant

Table 9 explores whether age is associated with differing assessments of leadership roles in EdTech policy implementation. Among the four leadership dimensions and the overall rating, only idealized influence yielded a statistically significant difference across age groups, with a p-value of 0.047. This leads to the rejection of the null hypothesis for that specific dimension, suggesting that respondents' age may influence how they perceive their leaders' role-modeling behavior and ethical leadership [12].

**Table 9.** Differences in the Assessment of Respondents on the Leadership Roles in the Implementation of Educational Technology Policies in Terms of Age

Indicator	Age	Mean	F	Sig.	Decision on Ho	Interpretation
Idealized Influence	Below 20	3.21	2.489	0.047	Rejected	Significant
	20–30	2.97				
	31–40	3.07				
	41–50	3.18				
	51 and above	2.94				
Inspirational Motivation	Below 20	3.09	1.779	0.138	Accepted	Not Significant
	20–30	3.15				
	31–40	3.26				
	41–50	3.25				
	51 and above	3.09				
Intellectual Stimulation	Below 20	3.24	0.645	0.631	Accepted	Not Significant
	20–30	3.28				
	31–40	3.34				
	41–50	3.42				
	51 and above	3.31				
Individualized Consideration	Below 20	3.31	0.791	0.533	Accepted	Not Significant
	20–30	3.21				
	31–40	3.26				
	41–50	3.13				
	51 and above	3.3				

Overall	Below 20	3.21	0.958	0.433	Accepted	Not Significant
	20–30	3.15				
	31–40	3.23				
	41–50	3.24				
	51 and above	3.16				

As presented in Table 10, the analysis examined differences in leadership assessment across varying levels of educational attainment—vocational, bachelor's, master's, and doctorate degrees. The statistical results indicate that there were no significant differences across all indicators, with p-values ranging from 0.192 to 0.828. All null hypotheses were accepted, meaning that respondents' educational qualifications did not significantly influence how they evaluated leadership behaviors in implementing EdTech policies.

**Table 10.** Differences in the Assessment of Respondents on the Leadership Roles in the Implementation of Educational Technology Policies in Terms of Highest Educational Attainment

Indicator	Highest Educational Attainment	Mean	F	Sig.	Decision on Ho	Interpretation
Idealized Influence	Vocational	3.00	0.916	0.436	Accepted	Not Significant
	Bachelor's	3.03				
	Master's	3.13				
	Doctorate	3.05				
Inspirational Motivation	Vocational	3.19	0.296	0.828	Accepted	Not Significant
	Bachelor's	3.17				
	Master's	3.15				
	Doctorate	3.12				
Intellectual Stimulation	Vocational	3.32	1.605	0.192	Accepted	Not Significant
	Bachelor's	3.3				
	Master's	3.23				
	Doctorate	3.42				
Individualized Consideration	Vocational	3.18	1.297	0.279	Accepted	Not Significant
	Bachelor's	3.22				
	Master's	3.32				
	Doctorate	3.29				
Overall	Vocational	3.17	0.398	0.754	Accepted	Not Significant
	Bachelor's	3.18				
	Master's	3.21				
	Doctorate	3.22				

Table 11 evaluates the influence of respondents' length of service on their assessment of leadership roles. Only inspirational motivation yielded a statistically significant difference ( $p = 0.004$ ), leading to the rejection of the null hypothesis for that indicator. The remaining variables—idealized influence, intellectual stimulation, individualized consideration, and the overall assessment—showed no significant differences, with p-values well above the 0.05 threshold.

**Table 11.** Differences in the Assessment of Respondents on the Leadership Roles in the Implementation of Educational Technology Policies in Terms of Length of Service

Indicator	Length of Service	Mean	F	Sig.	Decision on Ho	Interpretation
Idealized Influence	Below 5	3.05	0.719	0.543	Accepted	Not Significant
	5-10	3.00				
	11-15	3.12				
	Above 15	3.06				
Inspirational Motivation	Below 5	3.17	4.738	0.004	Rejected	Significant
	5-10	3.23				
	11-15	3.00				
	Above 15	3.24				
Intellectual Stimulation	Below 5	3.38	1.248	0.296	Accepted	Not Significant
	5-10	3.33				
	11-15	3.27				
	Above 15	3.21				
Individualized Consideration	Below 5	3.24	0.652	0.583	Accepted	Not Significant
	5-10	3.25				
	11-15	3.20				
	Above 15	3.34				
Overall	Below 5	3.21	0.598	0.618	Accepted	Not Significant
	5-10	3.2				
	11-15	3.15				
	Above 15	3.21				

3.4. Institutional Readiness: An Assessment Based on Resources, Culture, Skills, and Motivation

Table 12 illustrates respondents' assessment of their institution's readiness in implementing EdTech policies specifically in terms of available resources. The overall mean score of 3.22 (SD = 0.37) signifies that respondents "Agree" that resource readiness is implemented. Among the individual indicators, the highest mean score of 3.46 (SD = 0.83) corresponds to the presence of a reliable IT support team, indicating strong institutional infrastructure for resolving technical challenges, which is a critical enabler of seamless digital integration in educational settings.

**Table 12.** Assessment of Respondents on the Institutional Readiness in the Implementation of Educational Technology Policies in terms of Resources

Indicator	WM	SD	QD	VI
Our institution has sufficient internet connectivity to support digital teaching and learning	2.99	0.92	Agree	Implemented
Educational technologies such as learning management systems and digital tools are readily accessible to faculty and students	3.32	0.85	Agree	Implemented
There is a reliable IT support team available to assist with technical problems	3.46	0.83	Agree	Implemented

The institution allocates adequate budget for upgrading and maintaining educational technology infrastructure	3.28	0.77	Agree	Implemented
Classrooms and facilities are equipped with the necessary devices (e.g., computers, projectors, smart boards) for technology-based instruction	3.32	0.65	Agree	Implemented
The institution regularly invests in new technologies to keep pace with evolving educational needs	3.17	0.88	Agree	Implemented
Policies and systems are in place to ensure the sustainability of digital resources	2.99	0.92	Agree	Implemented
Overall Mean	3.22	0.37	Agree	Implemented

Legend: 3.51 -- 4.00 (Strongly Agree-Highly Implemented); 2.51 -- 3.50 (Agree-Implemented); 1.51 - - 2.50 (Disagree-Slightly Implemented); 1.0-1.50 (Strongly Disagree-Not Implemented).

Table 13 centers on the cultural dimension of institutional readiness for EdTech implementation. The overall mean score is 3.30 (SD = 0.26), indicating that respondents "Agree" on the presence of a supportive EdTech culture. The highest-rated item, "Faculty and staff are encouraged to explore and adopt new educational technologies," scored 3.52 (SD = 0.66), and is the only item classified as "Strongly Agree -- Highly Implemented." This result points to an institutional climate that actively fosters innovation and experimentation, which is fundamental to effective and sustainable digital transformation.

**Table 13.** Assessment of Respondents on the Institutional Readiness in the Implementation of Educational Technology Policies in terms of Culture

Indicator	WM	SD	QD	VI
The institution promotes a culture that values innovation and continuous improvement	3.25	0.84	Agree	Implemented
Faculty and staff are encouraged to explore and adopt new educational technologies	3.52	0.66	Strongly Agree	Highly Implemented
Faculty and staff are encouraged to explore and adopt new educational technologies	3.37	0.66	Agree	Implemented
There is a strong institutional belief in the value of technology for improving educational quality	3.17	0.84	Agree	Implemented
Colleagues collaborate and share best practices related to digital tools and resources	3.41	0.74	Agree	Implemented

Technology adoption is recognized and rewarded as part of institutional performance	3.33	0.74	Agree	Implemented
Resistance to change is addressed constructively within the organization	3.05	0.78	Agree	Implemented
Overall Mean	3.3	0.26	Agree	Implemented

Legend: 3.51 -- 4.00 (Strongly Agree-Highly Implemented); 2.51 -- 3.50 (Agree-Implemented); 1.51 - 2.50 (Disagree-Slightly Implemented); 1.0-1.50 (Strongly Disagree-Not Implemented).

Table 14 presents the respondents' assessment of institutional readiness in terms of skills, particularly faculty and staff digital competencies. The overall mean score is 3.12 (SD = 0.33), suggesting a moderate level of implementation of skill-based readiness. While still within the "Agree" range, this is the lowest among the four domains in the readiness assessment, indicating that skill development may be an area requiring more structured attention.

**Table 14.** Assessment of Respondents on the Institutional Readiness in the Implementation of Educational Technology Policies in terms of Skills

Indicator	WM	SD	QD	VI
Faculty members are proficient in using digital platforms for teaching and learning	2.93	0.89	Agree	Implemented
Training and workshops are regularly provided to enhance digital literacy among staff	2.9	0.87	Agree	Implemented
Staff are capable of troubleshooting basic technological issues independently	3.22	0.84	Agree	Implemented
The institution provides access to professional development programs focused on instructional technology	2.94	0.86	Agree	Implemented
Employees feel confident integrating technology into their everyday work processes	3.45	0.53	Agree	Implemented
Faculty members can design and deliver lessons using a variety of digital tools	3.24	0.83	Agree	Implemented
The institution assesses and monitors the digital competencies of its personnel	3.18	0.77	Agree	Implemented
Overall Mean	3.12	0.33	Agree	Implemented

Legend: 3.51 -- 4.00 (Strongly Agree-Highly Implemented); 2.51 -- 3.50 (Agree-Implemented); 1.51 - 2.50 (Disagree-Slightly Implemented); 1.0-1.50 (Strongly Disagree-Not Implemented).

Table 15 assesses the motivational readiness of faculty and staff in EdTech policy implementation, yielding an overall mean of 3.30 (SD = 0.33), which is tied with the

cultural domain as the highest among the four readiness categories. The highest-rated item, "There is a high level of commitment to the successful implementation of EdTech policies," received a mean of 3.54 (SD = 0.66), and is the only item rated as "Strongly Agree -- Highly Implemented." This underscores a shared institutional commitment and possibly a sense of collective ownership of the digital transformation process.

**Table 15.** Assessment of Respondents on the Institutional Readiness in the Implementation of Educational Technology Policies in terms of Motivation

Indicator	WM	SD	QD	VI
Faculty and staff are enthusiastic about using technology in their work	3.33	0.76	Agree	Implemented
There is a high level of commitment to the successful implementation of EdTech policies	3.54	0.66	Strongly Agree	Highly Implemented
Employees are willing to adapt to changes brought about by educational technologies	3.49	0.65	Agree	Implemented
Faculty view the use of technology as beneficial to student learning outcomes	3.26	0.72	Agree	Implemented
There is a shared motivation to improve the institution's digital capabilities	3.18	0.75	Agree	Implemented
Staff are proactive in seeking opportunities to enhance their digital teaching skills	3.4	0.75	Agree	Implemented
Educational technology is perceived as a valuable tool for achieving institutional goals	2.94	0.96	Agree	Implemented
Overall Mean	3.3	0.33	Agree	Implemented

Legend: 3.51 -- 4.00 (Strongly Agree-Highly Implemented); 2.51 -- 3.50 (Agree-Implemented); 1.51 - 2.50 (Disagree-Slightly Implemented); 1.0-1.50 (Strongly Disagree-Not Implemented).

Table 16 summarizes the assessments across all four domains of institutional readiness: resources (3.22), culture (3.30), skills (3.12), and motivation (3.30), with an overall mean score of 3.24 (SD = 0.15). All components fall within the "Agree -- Implemented" range, signaling a generally favorable evaluation of institutional preparedness for EdTech policy execution [8,13]. The low standard deviation reflects a

relatively uniform distribution of responses, indicating consistent perceptions among respondents.

**Table 16.** Summary Table on the Assessment of Respondents on the Institutional Readiness in the Implementation of Educational Technology Policies

Indicator	WM	SD	QD	VI
Resources	3.22	0.37	Agree	Implemented
Culture	3.3	0.26	Agree	Implemented
Skills	3.12	0.33	Agree	Implemented
Motivation	3.3	0.33	Agree	Implemented
Overall Mean	3.24	0.15	Agree	Implemented

Legend: 3.51 -- 4.00 (Strongly Agree-Highly Implemented); 2.51 -- 3.50 (Agree-Implemented); 1.51 - 2.50 (Disagree-Slightly Implemented); 1.0-1.50 (Strongly Disagree-Not Implemented).

*3.5. Differences in Institutional Readiness Evaluation Based on Personal Characteristics*

Table 17 examines whether sex influences respondents' perceptions of institutional readiness across the four key domains – resources, culture, skills, and motivation – as well as the overall readiness. All the p-values across indicators are above the 0.05 significance threshold, indicating no statistically significant differences between male and female respondents. The null hypothesis (Ho) is accepted for all dimensions, suggesting that both male and female respondents generally perceive the institution's readiness in similar ways.

**Table 17.** Differences in the Assessment of Respondents on the Institutional Readiness in the Implementation of Educational Technology Policies in terms of Sex

Indicator	Sex	Mean	t	Sig.	Decision on Ho	Interpretation
Resources	Male	3.26	.256	.614	Accepted	Not Significant
	Female	3.15				Significant
Culture	Male	3.26	2.901	.091	Accepted	Not Significant
	Female	3.36				Significant
Skills	Male	3.16	.093	.761	Accepted	Not Significant
	Female	3.07				Significant
Motivation	Male	3.28	.019	.891	Accepted	Not Significant
	Female	3.35				Significant
Overall	Male	3.24	.034	.853	Accepted	Not Significant
	Female	3.23				Significant

Table 18 explores how respondents' age influences their perceptions of institutional readiness in implementing EdTech policies. Across all five domains – resources, culture, skills, motivation, and overall readiness – the results show no statistically significant differences. All p-values exceed the 0.05 threshold, leading to the acceptance of the null hypothesis (Ho) in each case.

**Table 18.** Differences in the Assessment of Respondents on the Institutional Readiness in the Implementation of Educational Technology Policies in terms of Age

Indicator	Age	Mean	F	Sig.	Decision on Ho	Interpretation
Resources	Below 20	3.17	1.437	.226	Accepted	Not Significant
	20–30	3.24				Significant

		31–40	3.33			
		41–50	3.19			
		51 and above	3.1			
Culture	Below 20	3.34	1.925	.111	Accepted	Not Significant
	20–30	3.33				
	31–40	3.18				
	41–50	3.31				
	51 and above	3.35				
Skills	Below 20	3.2	1.166	.329	Accepted	Not Significant
	20–30	3.17				
	31–40	3.03				
	41–50	3.12				
	51 and above	3.09				
Motivation	Below 20	3.26	.846	.499	Accepted	Not Significant
	20–30	3.31				
	31–40	3.39				
	41–50	3.19				
	51 and above	3.3				
Overall	Below 20	3.24	.581	.677	Accepted	Not Significant
	20–30	3.26				
	31–40	3.23				
	41–50	3.2				
	51 and above	3.21				

Table 19 investigates how respondents' educational attainment shapes their perceptions of institutional readiness. Of the four domains assessed, only the "Skills" domain yielded a statistically significant difference ( $p = 0.001$ ), leading to the rejection of the null hypothesis ( $H_0$ ). This suggests that perceptions of institutional capacity to develop digital skills vary significantly across education levels. All other indicators—including resources, culture, motivation, and overall readiness—showed no significant differences, and  $H_0$  was accepted for those [14].

**Table 19.** Differences in the Assessment of Respondents on the Institutional Readiness in the Implementation of Educational Technology Policies in terms of Highest Educational Attainment

Indicator	Highest Educational Attainment	Mean	F	Sig.	Decision on $H_0$	Interpretation
Resources	Vocational	3.25	.195	.900	Accepted	Not Significant
	Bachelor's	3.21				
	Master's	3.21				
	Doctorate	3.18				

Culture	Vocational	3.3	2.645	.052	Accepted	Not Significant
	Bachelor's	3.27				
	Master's	3.24				
	Doctorate	3.43				
Skills	Vocational	3.21	6.015	.001	Rejected	Significant
	Bachelor's	3.1				
	Master's	3.19				
	Doctorate	2.89				
Motivation	Vocational	3.28	.562	.641	Accepted	Not Significant
	Bachelor's	3.26				
	Master's	3.36				
	Doctorate	3.31				
Overall	Vocational	3.26	1.051	.373	Accepted	Not Significant
	Bachelor's	3.21				
	Master's	3.25				
	Doctorate	3.2				

Table 20 evaluates the impact of respondents' length of service on their assessment of institutional readiness. Out of the five domains, two showed statistically significant differences: Culture (p = 0.022) and Motivation (p = 0.041), leading to the rejection of the null hypothesis for these two. For the remaining domains—resources, skills, and overall readiness—the differences were not statistically significant [15,16].

**Table 20.** Differences in the Assessment of Respondents on the Institutional Readiness in the Implementation of Educational Technology Policies in terms of Length of Service

Indicator	Length of Service	Mean	F	Sig.	Decision on Ho	Interpretation
Resources	Below 5	3.16	.510	.676	Accepted	Not Significant
	5-10	3.2				
	11-15	3.25				
	Above 15	3.29				
Culture	Below 5	3.41	3.320	.022	Rejected	Significant
	5-10	3.23				
	11-15	3.27				
	Above 15	3.34				
Skills	Below 5	3.03	1.166	.326	Accepted	Not Significant
	5-10	3.14				
	11-15	3.19				
	Above 15	3.14				
Motivation	Below 5	3.26	2.848	.041	Rejected	Significant
	5-10	3.42				
	11-15	3.25				
	Above 15	3.2				
Overall	Below 5	3.22	.218	.884	Accepted	Not Significant
	5-10	3.25				

11–15	3.24
Above 15	3.24

3.6. The Intrinsic Relationship between Leadership Roles and Institutional Readiness

Table 21 provides insight into the associative relationships between leadership roles and institutional readiness dimensions in the context of educational technology implementation. Using Pearson's r, the table highlights whether changes in leadership performance (in terms of transformational domains such as Idealized Influence, Inspirational Motivation, Intellectual Stimulation, and Individualized Consideration) are associated with varying levels of institutional readiness across resources, culture, skills, and motivation. Out of 16 possible correlations, three are statistically significant at  $p < .05$ , which is a relatively limited but meaningful indication of selective interrelationships.

**Table 21.** Correlation Between the Assessment of Respondents on the Leadership Roles and Institutional Readiness in the Implementation of Educational Technology Policies

Leadership Roles	Institutional Readiness	Computed r	Sig.	Decision	Interpretation
Idealized Influence	Resources	-.212*	.020	Rejected	Significant
	Culture	.117	.204	Accepted	Not Significant
	Skills	.032	.730	Accepted	Not Significant
	Motivation	.067	.466	Accepted	Not Significant
Inspirational Motivation	Resources	-.129	.160	Accepted	Not Significant
	Culture	-.083	.366	Accepted	Not Significant
	Skills	-.078	.400	Accepted	Not Significant
	Motivation	.084	.364	Accepted	Not Significant
Intellectual Stimulation	Resources	-.094	.307	Accepted	Not Significant
	Culture	.035	.702	Accepted	Not Significant
	Skills	-.215*	.019	Rejected	Significant
	Motivation	.073	.430	Accepted	Not Significant
Individualized Consideration	Resources	-.297**	.001	Rejected	Significant
	Culture	.021	.819	Accepted	Not Significant
	Skills	-.051	.580	Accepted	Not Significant
	Motivation	.235**	.010	Rejected	Significant

Leadership Roles	Institutional Readiness	-.124	.179	Accepted	Not Significant
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#### 4. Discussions

The demographic profile of respondents was fairly evenly distributed across age, sex, educational attainment, and length of service: the 20–30 age group was the largest (30.8%), males (58.3%) outnumbered females (41.7%), vocational graduates (31.7%) and master's holders (27.5%) were the main subgroups, and 35.8% had 5–10 years of service, ensuring diverse perspectives. Respondents rated all four transformational leadership dimensions (Idealized Influence: 3.05, Inspirational Motivation: 3.16, Intellectual Stimulation: 3.31, Individualized Consideration: 3.25; overall mean 3.19) as "Agree – Implemented," with Intellectual Stimulation most effective and Idealized Influence needing improvement. Institutional readiness (overall mean 3.24) was also "Implemented," with Culture and Motivation scoring highest (3.30) and Skills lowest (3.12), indicating insufficient digital training.

No statistically significant differences in assessments of leadership and readiness were found by sex or age, reflecting equitable implementation, though slight perceptual trends existed. Significant differences emerged by educational attainment (skills domain,  $p = .001$ , doctorate holders rating lower) and length of service (culture,  $p = .022$ ; motivation,  $p = .041$ , newer employees favoring culture, mid-career professionals showing higher motivation). Correlation analysis revealed three significant relationships: negative correlations between Idealized Influence and Resources ( $r = -0.212$ ,  $p = .020$ ) and Intellectual Stimulation and Skills ( $r = -0.215$ ,  $p = .019$ ), and a positive correlation between Individualized Consideration and Motivation ( $r = 0.235$ ,  $p = .010$ ), emphasizing the need for context-aware leadership [17].

#### 5. Conclusions

This study concludes that the diverse demographic composition of the respondents, balanced in terms of age, sex, educational attainment, and length of service, provided a reliable and comprehensive basis for assessing leadership roles and institutional readiness in the implementation of educational technology policies. Such diversity enhanced the validity of the findings and offered nuanced perspectives on institutional practices.

The findings further reveal that the implementation of educational technology policies at the institution is generally positive, although there remains room for improvement. All four dimensions of transformational leadership were assessed at the level of "Agree -- Implemented," indicating that leadership support for EdTech integration is evident. Among these dimensions, Intellectual Stimulation emerged as the most strongly perceived, suggesting that leaders effectively encourage innovation and problem-solving in technology adoption. However, Idealized Influence received the lowest rating, indicating the need to further strengthen leaders' ethical visibility, role-modeling behavior, and trust-building practices.

In terms of institutional readiness, the study confirms that the institution demonstrates relatively strong performance in organizational culture and staff motivation, both of which provide a supportive environment for educational technology implementation. Nevertheless, digital skills development and professional training were identified as areas requiring further enhancement to ensure the sustainable and effective use of educational technologies.

The study also found no significant differences in respondents' perceptions when grouped according to sex and age, reflecting a relatively equitable implementation environment. However, significant differences were observed in relation to educational attainment and length of service, with doctorate holders and senior faculty members tending to provide more critical assessments. This finding suggests the need for more differentiated and context-sensitive leadership approaches that respond to the diverse expectations of faculty groups.

Finally, the correlation analysis confirmed a meaningful relationship between leadership roles and institutional readiness, highlighting the critical role of adaptive and transformational leadership in strengthening staff motivation, institutional support systems, and the successful implementation of educational technology policies.

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