European Journal of Education Studies
ISSN: 2501 - 1111
ISSN-L: 2501 - 1111
Available online at: www.oapub.org/edu

DOI: 10.46827/ejes.v12i11.6259 Volume 12 | Issue 11 | 2025

BUILDING FUTURE-READY HIGHER EDUCATION INSTITUTIONS IN REGION XI: AN ANALYSIS OF THE HIGHER EDUCATION INSTITUTIONS FOR DIGITAL TRANSFORMATION

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Abstract:
This study aimed to design a future-ready model to strengthen the adaptive capacity of Higher Education Institutions (HEIs) in Region XI for sustaining digital transformation, guided by the 7S McKinsey Framework. Using a descriptive-comparative research design, data were gathered from institutional respondents representing various universities and colleges across the region. The framework examined seven key dimensions: strategy, structure, systems, shared values, skills, staff, and style to assess current practices and anticipate future needs. Findings revealed that HEIs in Region XI demonstrate a generally high level of adaptation in digital transformation across all seven dimensions, with shared values and staff emerging as the strongest enablers, while systems and skills presented areas needing improvement. Factors influencing digital transformation included leadership commitment, technology infrastructure, staff competency, and alignment of institutional vision with digital goals. Comparative analysis indicated significant differences in adaptation levels when grouped according to institutional characteristics, particularly in terms of size, funding type, and years in operation. The study concludes that while HEIs in Region XI have made notable progress in digital transformation, there remain critical gaps in skills development, system integration, and continuous innovation strategies. A proposed future-ready model was developed to address these gaps, emphasizing strategic alignment, robust technological systems, and capacity-building programs. This model aims to guide HEIs toward sustainable, technology-driven growth and resilience in an increasingly digital academic landscape.

Keywords: digital transformation, higher education institutions, future-ready model

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1. Introduction

1.1 Background of the Study

The digital transformation of education involves the use of information technology and contemporary devices in teaching and learning, enabling students and teachers to exercise critical thinking, creativity, and initiative. According to Kretschmer and Khashabi, (2020), this process saves time and costs and helps overcome obstacles like location and time. Furthermore, digital transformation involves disruptions and strategic responses from organizations, requiring ongoing integration of digital technologies into any field (Wirtz *et al.*, 2022).

Transformation in education, on the other hand, involves enhancing technology, teaching pedagogies (Benade & Jackson, 2018), and processes, transcending temporal and spatial boundaries (Granados-Sánchez, 2022). The digital age has affected human life, and the COVID-19 pandemic has complicated the digital transformation of social, technological, economic, political, and environmental developments, as well as trends in education (Voronkova *et al.*, 2023).

Digital transformation is a recent phenomenon, primarily explored in management, marketing, and information systems (Lanzolla *et al.,* 2020). However, there is a need for more research on accommodating various stakeholders in the education sector. Despite most students being digital migrants, school administrators and program specialists need essential skills to handle this shift. The Unified Theory of Acceptance and Use of Technology may help.

The unified technology acceptance model, developed by Venkatesh *et al.* (2003), is a useful tool for presenting useful educational technology and reducing rejection in a digitally transformed world. It aids in selecting appropriate technology for digital transformation in education (Mohamed Hashim *et al.,* 2022). The COVID-19 pandemic has highlighted the need to adopt technology for digital transformation. However, politicians often reject technology if they don't understand its benefits. Moreover, Sridhar, V. (2021) mentioned that to counteract pandemic isolation, schools must adopt a data-centric strategy and use digital technology services to hasten digital transformation.

2. Scope of the Study

This study focuses on developing a model to accelerate digital transformation in selected universities and colleges in Region XI. The respondents will primarily consist of teachers from various institutions, with a target sample size of 515 participants. Data will be collected through a structured questionnaire designed to capture key factors influencing digital transformation.

The study will utilize Exploratory Factor Analysis (EFA), following the methodological guidelines of Fabrigar and Wegener (2012), to identify the latent constructs that represent the underlying dimensions of digital transformation. After determining the significant constructs, Multiple Regression Analysis will be employed to

examine the extent to which these constructs predict the acceleration of digital transformation. This combination of EFA and regression ensures both the identification of essential factors and the measurement of their predictive power within the educational context.

2.1. Statement of the Problem

This study aims to design a future-ready model that will strengthen the adaptive capacity of Universities and Colleges in Region XI to navigate and sustain digital transformation, using the 7S McKinsey Framework as a strategic lens. By assessing present conditions and anticipating future demands, the research seeks to provide a foundation for sustainable, technology-driven growth in higher education. Specifically, it addresses the following questions:

1) Determine the institutional profile of respondents on the adaptation of digital transformation in Higher Education Institutions in Region XI, analyzed through the 7S McKinsey Framework, specifically in terms of:
   a) Strategy,
   b) Structure,
   c) Systems,
   d) Shared Values,
   e) Skills,
   f) Staff,
   g) Style.
2) What factors influence the adaptation of digital transformation in Higher Education Institutions in Region XI within the context of the 7S McKinsey Framework?
3) Is there a significant difference in the factors of Digital Transformation when grouped by the institutional profile?

2.2 Objectives of the Study

The overarching goal of this study is to design a future-ready model that will enhance the adaptive capacity of higher education institutions (HEIs) in Region XI to successfully navigate and sustain digital transformation, guided by the 7S McKinsey Framework. This model aims to integrate current institutional realities with future demands, enabling sustainable, technology-driven growth in the higher education sector.

To achieve this, the study first seeks to determine the institutional profile of respondents in terms of the seven dimensions of the 7S McKinsey Framework: strategy, structure, systems, shared values, skills, staff, and style. This assessment will provide a comprehensive picture of how each element currently supports or constrains digital transformation.

Next, identify and extract the latent factors influencing the adaptation of digital transformation, applying Exploratory Factor Analysis (EFA) to uncover the underlying

relationships among the seven dimensions of the framework. This step is critical in determining the core constructs that drive or hinder adaptation efforts in HEIs.

Finally, the study will examine whether significant differences exist in these identified factors when respondents are grouped according to their institutional profile. This comparative analysis will help reveal patterns, gaps, and disparities in adaptation readiness, thereby offering evidence-based insights for policymaking, strategic planning, and capacity-building initiatives in the region's higher education sector.

3. Literature Review

3.1 Academic Institutional Profile

The academic institution's culture, resources, leadership, and infrastructure significantly influence its ability to adapt to the digital revolution (Omodan, 2024). Digital transformation in organizations involves using digital technologies to develop new business models (Buntak, *et al.,* 2020), focusing on knowledge management and transfer (Erceg & Zoranović, 2022). Ghoshal and Bruckman (2019) highlighted that Organizations that use ICT hierarchically can mobilize resources quickly but struggle to build a local activist community, and Kalyani (2024) added that online learning promotes technology use in teaching and learning processes and fosters digital resources, including communication tools (Adeshina, 2024). Similarly, Bhuttah *et al.* (2024) stated that pedagogical leaders play a crucial role in fostering a strong online discussion community and critical thinking. This is why technology in education is inevitable, and motivation is essential for students to engage with online channels (Jain & Roy, 2022).

3.2 Digital Transformation

The COVID-19 pandemic has accelerated the transition of education, posing challenges for schools and institutions. The Philippines' infrastructure is poor, and digital transformation is particularly impacting higher education systems (Binaluyo *et al.,* 2024). Digitization should not be confused with digital transformation, which involves changing the relationship between people, technology, pedagogies, and function in education and the social environment. Added hereto, Siebel (2019) discussed the digital transformation and how it is crucial for organizations to reinvent themselves and succeed in the new digital environment. However, Gouda (2020) explains that the workforce lacks the necessary digital skills to work in this new environment, requiring significant work.

Benoit & Rogers (1964) identified four categories of adopters: innovators, early majority, late majority, laggards, and public. The digital divide is divided into three types: innovators, early majority, late majority, and laggards (Ayinla & Adamu, 2018). Kolsi (2023) discussed that the late majority is skeptical, while laggards are traditional and resistant to change. In fact, Kummitha (2020) stated that government leaders may be more dangerous, as the repercussions of not adopting technology could be severe. This division and variety should be considered when creating technology or e-services to

ensure a seamless transition for users, accelerating digital transformation in education. Research into factors influencing the speed of digital transformation is crucial.

3.2.1 Strategy

A well-defined institutional strategy serves as the foundation for meaningful digital transformation, ensuring that the university's digital vision is aligned with its overarching mission and academic objectives (Future Ventures, 2025). Higher education institutions that establish long-term online learning policies or structured frameworks for hybrid education demonstrate greater agility and resilience, particularly in navigating disruptive events such as the COVID-19 pandemic (Martin, 2022).

In the context of Mindanao's Region XI, forward-looking universities develop evolving strategic roadmaps that balance innovation goals with equitable access to learning and sustained capacity building (Commission on Higher Education Regional Office XI [CHED-RO XI], 2024). This commitment to transparent and inclusive strategy not only strengthens institutional credibility but also guides investments in advanced digital platforms while preserving core educational principles (McKinsey 7S Framework, 2025).

Without strategic clarity, however, digital initiatives risk becoming fragmented due to unclear priorities and misaligned allocation of resources (Future Ventures, 2025). The McKinsey 7S framework illustrates that when strategy is poorly defined, it can disrupt the alignment of systems, structure, and organizational culture, thereby weakening the overall transformation process (McKinsey 7S Framework, 2025).

3.2.2 Structure

A university's organizational structure significantly shapes its capacity to enact digital transformation when governance is decentralized to integrate IT and academic units, or when institutions establish dedicated digital transformation teams; they tend to adapt more rapidly to emergent technologies (Future Ventures, 2025).

In Region XI, future-ready higher education institutions achieve this through cross-functional structures such as digital learning committees or CIO-enabled councils that bridge administrative and academic silos, clarifying roles and promoting coordinated decision-making, thereby smoothing the deployment of digital tools (Whatfix, 2022). In contrast, a misaligned structure risks confining digital innovation to isolated pockets or stalling progress when leadership transitions occur; the McKinsey framework underscores that even the most well-designed strategies cannot succeed without appropriate structural alignment (Third Stage Consulting, 2025; McKinsey 7S Framework, 2025).

3.2.3 Systems

Operational systems, including learning management systems (LMS), cloud platforms, e-services, and cybersecurity frameworks, are the backbone of digital transformation in higher education. Nearly all institutions now employ an LMS, with faculty and students

generally reporting high satisfaction in its ability to streamline content delivery and course management (EDUCAUSE, 2018).

In the Philippine context of Region XI, building future-ready institutions means deploying scalable, secure, and user-friendly systems such as AI-enhanced LMSs, unified student portals, and automated administrative workflows tailored to local needs. Cloud-based infrastructure proves particularly valuable during disruptions, enabling responsive and accessible operations even amid connectivity challenges (Alimboyong & Bucjan, 2021)

Nonetheless, system maintenance and modernization remain critical: legacy systems often impose hidden costs, introduce operational strain, and delay modernization efforts, undermining agility (Thesai.Org, 2021). Moreover, the McKinsey 7S framework emphasizes that without aligning system upgrades with institutional strategy and structure, digital transformation efforts risk inconsistency, deployment delays, and diminished impact.

3.2.4 Shared Values

Shared values in higher education institutions are foundational in shaping organizational identity and culture, offering both ethical direction and strategic alignment for digital transformation initiatives, particularly critical in a region.

In Region XI, where institutional missions and long-term goals must guide modernization processes (Chanias *et al.*, 2021). Institutional commitment to digital transformation reflects a shared value in promoting accessibility, equity, and educational quality; embedding values such as lifelong learning, openness to change, and collaboration helps reduce resistance to digital adoption and fosters an inclusive, future-ready academic ecosystem (Chanias *et al.*, 2021; Alrasheedi *et al.*, 2018). These shared values serve as a bridge between traditional academic practices and evolving digital trends; institutions that cultivate adaptability, innovation, and appreciation for diversity are better positioned to lead culturally responsive digital transformations that are technologically viable and socially sustainable (MDPI, 2022; JPADA, 2024).

3.2.5 Style

Leadership style is central to shaping the organizational climate that supports digital transformation, as the McKinsey 7S Framework emphasizes the influence of leadership behavior on broader cultural and strategic alignment. Participative and visionary leadership styles cultivate innovation, while authoritarian approaches often suppress creativity and morale (Verywell Mind, 2010).

In higher education institutions (HEIs), effective digital leadership blends directive guidance with supportive collaboration, setting clear objectives while allowing room for experimentation. This aligns with path-goal theory, which outlines leadership behaviors such as participative, directive, supportive, and achievement-oriented approaches; these, when combined, significantly enhance faculty motivation and integration of ICT into teaching and learning (Mertens *et al.*, 2024). Transformational

leadership is a style that inspires vision, encourages continuous learning, and empowers faculty to innovate has been demonstrated to drive technology adoption and elevate institutional performance (Bohari *et al.*, 2024)

Moreover, authentic leadership behaviors marked by trust, transparency, and openness positively influence educators' digital preparedness and productivity, promoting an environment where staff feel equipped and motivated to engage in online work (Kelderm *et al.,* 2025). Ultimately, an adaptive, inclusive, and innovation-oriented leadership style fosters the cross-departmental collaboration, knowledge sharing, and professional growth necessary for creating a culture of excellence and forward-looking innovation in higher education.

4. Methods

4.1 Data Analysis

This study adopts a quantitative research design within a postpositivist paradigm to objectively examine theoretical relationships and present findings with established validity and reliability. A researcher-made questionnaire will serve as the primary data collection tool, aimed at identifying factors that accelerate digital transformation in basic education. Data will be gathered from 515 respondents from Higher Education Institutions (HEIs) in Region XI. Of these, 200 responses will be utilized for Exploratory Factor Analysis (EFA), while the remaining 315 responses will be used for regression analysis. The questionnaire will undergo reliability testing through Cronbach's Alpha and Composite Reliability measures. A simple random sampling technique will be employed for both phases, as a sample size of 200 is sufficient for EFA under moderately good conditions.

The EFA will be used to identify latent constructs from the 52 items in the instrument, excluding demographic variables. Factor extraction will be conducted using Principal Components Analysis, with factors retained based on eigenvalues greater than 1. Convergent validity will be assessed using the Average Variance Extracted (AVE). The internal consistency of each factor will be evaluated through Cronbach's Alpha, with values below 0.70 still considered acceptable for exploratory research (Hair *et al.*, 1999). Following EFA, multiple regression analysis will be applied to determine the extent to which the identified factors predict the adaptation of digital transformation.

5. Findings and Discussions

5.1 Institutional Characteristics of Higher Education Institutions in Region XI in the Context of the McKinsey 7S Framework

Table 1 presents a descriptive summary of the 7s McKinsey framework, examining various dimensions, including Strategy, Structure, System, Shared Values, Skills, Style, and Staff. Each variable is assessed based on respondents' ratings, represented by the Mean and Standard Deviation. The Mean values for each dimension are consistently

high, ranging from 4.02 to 4.36, indicating a very high level of agreement or positive perception among respondents. The Standard Deviation values are relatively low, suggesting a narrow dispersion of responses and a high level of consensus among respondents. Specifically, the dimension of System has the lowest Mean at 4.02, signifying a high rating but slightly below the mean scores of other dimensions. This suggests that while the System component is perceived positively, there might be a slightly lower level of agreement compared to other factors. Overall, the Overall Mean of 4.20 reinforces the notion that respondents generally view the organization's 7s elements favorably, with a consistent and high level of agreement across all dimensions. The descriptive summary provides valuable insights into the perceived strengths of the organization based on the 7s McKinsey framework.

Table 1: Institutional Characteristics of Higher Education Institutions in Region XI in the Context of the McKinsey 7S Framework

Variable	Mean	Std. Dev.	Description
Strategy	4.32	0.58	Very High
Structure	4.29	0.56	Very High
System	4.02	0.33	High
Share Value	4.29	0.62	Very High
Skills	4.36	0.54	Very High
Style	4.33	0.58	Very High
Staff	4.32	0.58	Very High
Overall Mean	4.20	0.47	Very High

5.2 Key Factors Shaping the Adaptation of Digital Transformation in Higher Education Institutions in Region XI: A McKinsey 7S Framework Perspective

Table 2 presents the factor loadings from the data the following were Factor 1 Shifting Towards a Digitally Enabled Academic Institution, for the factor 2 Digital Technology Adoption and Workforce Upskilling, factor 3 is Navigating a Tech-Driven Future, and factor 4 Advancing Acceptance and Engagement for Both Digital Natives and Migrants.

Institutions are embracing a shift towards technology-enabled processes, systems, and pedagogies, adopting modern teaching methodologies and integrating emerging technologies. This shift requires requalification, continuous training, fostering soft skills, and cultivating a culture that embraces innovation. This transformation is both cultural and structural, ensuring higher education institutions remain competitive, future-ready, and responsive to learners' needs in a technology-centered society.

Ndibalema (2022) and Al-Badi & Khan (2022) discuss challenges faced by Higher Education Institutions in developing countries transitioning to online learning during the COVID-19 pandemic, including digital inequalities, internet access, low technological competence, and limited digital solutions. They recommend investment in digital culture and equity.

Table 2: Shifting Towards a Digitally Enabled Academic Institution

Variables	Statement	Scores	Construct
s29	Teaching approaches incorporate playful learning through both digital and physical technologies.	0.889	Shifting Towards a Digitally Enabled Academic Institution
s30	Teachers actively integrate digital technologies for individual and collaborative teaching and learning.	0.798	
s5	The institution fosters "learning-to-learn" skills among teachers, leaders, staff, and students.	0.786	
s3	Digitization is embedded as a core element of the institution's business model.	0.779	
s42	Stakeholders and students adopt an innovation-driven mindset to align learning outcomes with technological advancements.	0.766	
s27	Students are trained in essential computational thinking skills.	0.766	
s2	Organizational changes are guided by innovative, technology-driven process models.	0.741	
s6	Digital and physical technologies are fully integrated to support universal access to education.	0.684	
s25	Augmented reality tools are incorporated into teaching and learning activities.	0.683	
s1	The organizational structure is strategically designed to support digital transformation.	0.678	
s17	Innovative teaching strategies empower students to take ownership of their learning using acquired digital skills.	0.671	
s4	The organization embraces digital technologies as essential to enhancing the educational experience.	0.67	
s31	Leaders transition away from traditional knowledge delivery, granting teachers autonomy in integrating digital tools.	0.67	
s24	Teachers are given autonomy to innovate and adapt their classroom practices.	0.658	
s7	The institution restructures its operations to welcome the development and adoption of digitally transformative technologies (e.g., procurement, budgeting).	0.655	
s28	Pedagogical approaches emphasize action-oriented and experiential learning.	0.649	
s15	The institution utilizes software solutions that simplify educators' and staff tasks (e.g., online grading systems, websites).	0.647	
s26	Learning management systems and other educational software are integral to the teaching process.	0.634	
s16	The institution equips all stakeholders with the skills needed to build a cohesive, inclusive, and technologically proficient society.	0.615	
s39	The institution has the autonomy to remove redundant or unnecessary tasks.	0.574	

s13	Physical and digital technologies are developed to streamline institutional processes.	0.571	
s18	Teachers adapt their pedagogy in response to evolving technological advancements.	0.53	
s12	E-services simplify processes for educators and stakeholders.	0.527	
s38	Stakeholders demonstrate a proactive and positive attitude toward change.	0.522	
s23	Pedagogy equips students with both hard and soft technological skills to drive positive societal change.	0.518	
s11	The institution adopts relevant technologies already proven in the private sector.	0.507	
s14	The institution continuously upgrades its physical technology	0.496	
s40	Teachers and staff consistently consider technological improvements in their work processes.	0.496	
s10	The institution acquires up-to-date technologies for teaching and data processing.	0.458	
s9	Organizational processes are enhanced and oriented toward developing digital hard and soft skills.	0.453	

Factor 3 highlights the importance of digital technology Adoption and Workforce Upskilling. Teachers are encouraged to adopt innovative approaches, adopt assessment methods, and adopt digital technologies. Policies are geared towards utilizing digital technologies, and young teachers are sent to seminars and training.

Pedagogy is integrated with technology and policy, and digital skills are upgraded across departments. The rapid political, social, and economic changes in Europe have led to significant transformations in the educational sphere, particularly in Ukraine. The digital revolution has significantly impacted education, with the COVID pandemic causing exponential growth. A new educational hybrid model emphasizes the importance of educators and their digital competence.

Table 3: Digital Technology Adoption and Workforce Upskilling

Variables	Statement	Scores	Constructs
s51	Teachers, academic leaders, and staff view pedagogical changes as beneficial and necessary for future learning environments.	0.883	Digital Technology Adoption and Workforce Upskilling
s19	Students are equipped with soft skills that prepare them to address challenges and adapt to future demands.	0.883	
s36	Teachers, academic leaders, and staff perceive changes in technology and teaching methods as positive steps toward progress.	0.883	
s52	Continuous training and requalification in digital technologies and modern pedagogies are required for both teachers and academic leaders.	0.878	

s20	The organizational culture is anchored in 21st-century skills, prioritizing innovation over political or personal interests in education.	0.878	
s35	Academic leaders are open to shifting their philosophy toward a technology-driven society, setting aside vested interests for institutional advancement.	0.878	
s34	Teachers, academic leaders, and staff view pedagogical changes as beneficial and necessary for future learning environments.	0.64	
s21	Students are equipped with soft skills that prepare them to address challenges and adapt to future demands.	0.64	
s45	Teachers, academic leaders, and staff perceive changes in technology and teaching methods as positive steps toward progress.	0.64	
s46	Continuous training and requalification in digital technologies and modern pedagogies are required for both teachers and academic leaders.	0.64	

Factor 4 highlighted the acceptance of changes in pedagogy, soft skills, technology, training, and requalification in a tech-driven society. Teachers, leaders, and staff prioritize 21st-century skills over human subjects, and leaders are willing to embrace technology over vested interests and motives. This approach fosters a tech-driven society.

Vetitnev *et al.* (2020) discuss the integration of traditional and digital technologies in vocational education, highlighting their importance in improving quality. Bakhmat *et al.* (2022) explore the impact of immersive technologies on teachers' professional development, focusing on VR, AR, MR, and XR lessons. Both studies use scientific, educational, and scientific-technological methodologies.

Table 4: Navigating a Tech-Driven Future

Variables	**Statement**	**Scores**	**Constructs**
s22	Teachers, academic leaders, and staff recognize and accept the need for evolving pedagogical approaches to meet future educational demands.	0.981	Navigating a Tech-Driven Future
s47	Students possess soft skills that enable them to effectively address problems and adapt to future challenges.	0.981	
s41	Teachers, academic leaders, and staff view advancements in technology and teaching methods as positive and necessary for institutional growth.	0.981	
s48	Ongoing training and requalification in digital technologies and modern pedagogies are mandated for both teachers and academic leaders.	0.967	
s43	The organization's mindset is rooted in 21st-century skills, prioritizing innovation and progress over political or personal agendas in education.	0.967	

s32	Leaders are open to transforming their educational philosophy to align with a technology-driven society, setting aside vested interests for the benefit of the institution.	0.967	

Factor 5 reflects the 5th dimension, which is the Advancing Acceptance and Engagement for Both Digital Natives and Migrants in the context of digital adaptation and the McKinsey 7S Framework. The table highlights the importance of supportive policies, informed leadership, operational integration, cultural readiness, and inclusivity between generations in bridging the digital divide in Higher Education Institutions (HEIs). It emphasizes the role of organizational policies that encourage teachers' autonomous innovation in pedagogy, leaders' awareness of technological advancements, and the integration of digital solutions into daily operations. The culture that openly embraces technological change mitigates generational differences in technology use, and the practice of technology utilization by both digital native and digital migrant educators indicates progress toward digital equity. This factor supports the shared values, style, and staff elements of the McKinsey 7S Framework, ensuring digital transformation is a deeply rooted cultural shift towards a future-ready educational environment.

The study by Nikou *et al.* (2019) compares the intentions of digital immigrants and natives to use digital technology. Results show that digital immigrants use technologies differently, and information literacy doesn't significantly impact natives' intentions. The review suggests expanding models and integrating sustainability and digital divide studies.

Table 5: Advancing Acceptance and Engagement for Both Digital Natives and Migrants

Variables	Statement	Scores	Constructs
s33	Institutional policies are established to encourage and support teachers' autonomous innovation in pedagogy.	0.926	Advancing Acceptance and Engagement for Both Digital Natives and Migrants
s37	Academic leaders maintain awareness of genuine advancements and evolving trends in technology, student needs, and real-world contexts.	0.926	
s44	The institution and its employees integrate digital solutions seamlessly into daily practices and operations.	0.926	
s49	A culture exists that embraces and adapts to technological changes with openness and readiness.	0.926	
s50	The utilization of technology is embraced and practiced by both digital native and digital migrant teachers within the Department of Education.	0.926	

5.3 Building Future-Ready for Digital Transformation when grouped by the Institutional Profile in the context of 7s McKinsey Framework

Table 6 presents the ANOVA results for Building Future-Ready Digital Transformation when grouped by the Strategy component of the McKinsey 7S Framework. Four strategy-related factors were tested, each showing variance between groups and within groups. The results suggest that institutional strategy significantly influences how Higher Education Institutions (HEIs) in Region XI prepare for future-ready digital transformation. Factor 1 shows the largest variation, indicating that certain institutional groups have stronger or more mature strategic approaches to digital transformation than others. Factors 2, 3, and 4 also show significant differences, indicating that approaches to long-term digital planning, resource alignment, and innovation readiness vary widely depending on institutional characteristics. Strategic clarity and alignment are critical to transformation success.

Table 6: Building Future-Ready for Digital Transformation when grouped by Strategy in 7s McKinsey Framework

Strategy	Source	SS	df	MS	F	Prob > F	Decision on Ho
Factor 1	Between groups	84.2866106	19	4.4361374	108.91	0.0000	Reject Ho
	Within groups	11.4047005	280	0.04073107			
	Total	**95.691311**	**299**	**0.32003783**			
Factor 2	Between groups	59.7453949	19	3.14449447	17.13	0.0000	Reject Ho
	Within groups	51.3859942	280	0.18352141			
	Total	**111.131389**	**299**	**0.37167689**			
Factor 3	Between groups	63.8491735	19	3.36048282	36.03	0.0000	Reject Ho
	Within groups	26.1149164	280	0.09326756			
	Total	**89.96409**	**299**	**0.30088324**			
Factor 4	Between groups	68.4061789	19	3.6003252	21.81	0.0000	Reject Ho
	Within groups	46.2248499	280	0.16508875			
	Total	**114.631029**	**299**	**0.38338137**			

Table 7 shows the F-statistic for each factor, which compares the ratio of between-groups variability to within-groups variability. Higher F-values indicate larger differences between group means relative to within-group variability. The p-value associated with each F-statistic is extremely low (0.0000) for all factors. This indicates a strong statistical significance, suggesting that the observed differences between group means for each factor are highly unlikely to be due to random chance. With p-values significantly below the common significance level of 0.05, the decision for each factor is to reject the null hypothesis (Ho). This implies that there is strong evidence to support the claim that there are significant differences between the groups for each factor. The rejection of the null hypothesis for all four factors implies that each factor has a significant impact on the observed outcomes. This information is crucial for understanding the factors influencing the dependent variable and may have practical implications depending on the context of the study. In conclusion, the findings clearly imply that there are notable and statistically significant distinctions between the groups that each of the four components in your

research represents. These results add important context to your comprehension of the links or effects under investigation.

Table 7: Building Future-Ready for Digital Transformation when grouped by structure under 7s McKinsey Framework

Structure	Source	SS	df	MS	F	Prob > F	Decision on Ho
Factor 1	Between groups	48.9442273	16	3.05901421	18.52	0.0000	Reject Ho
	Within groups	46.7470837	283	0.16518404			
	Total	**95.691311**	**299**	**0.32003783**			
Factor 2	Between groups	68.8995408	16	4.3062213	28.86	0.0000	Reject Ho
	Within groups	42.2318483	283	0.14922915			
	Total	**111.131389**	**299**	**0.37167689**			
Factor 3	Between groups	61.1114252	16	3.81946407	37.46	0.0000	Reject Ho
	Within groups	28.8526648	283	0.10195288			
	Total	**89.96409**	**299**	**0.30088324**			
Factor 4	Between groups	75.7519815	16	4.73449884	34.46	0.0000	Reject Ho
	Within groups	38.8790473	283	0.13738179			
	Total	**114.631029**	**299**	**0.38338137**			

Table 8 compares the ratio of between-groups variability to within-groups variability. Higher F-values indicate larger differences between group means relative to within-group variability. The p-value associated with each F-statistic indicates the probability of observing an F-ratio as extreme as the one computed from your data, assuming the null hypothesis (Ho) is true. The results suggest that, for each factor, there is no strong statistical evidence to reject the null hypothesis. This means that, based on the analysis, there is insufficient support to conclude that there are significant differences between the groups represented by each factor. In summary, the results suggest that, based on the p-values provided, there is no strong statistical evidence to reject the null hypothesis for any of the four factors.

Table 8: Building Future-Ready for Digital Transformation when grouped by system under 7s McKinsey Framework

System	Source	SS	df	MS	F	Prob > F	Decision on Ho
Factor 1	Between groups	5.07786065	13	0.39060467	1.23	0.255	Failed to Reject Ho
	Within groups	90.6134504	286	0.31683025			
	Total	**95.691311**	**299**	**0.32003783**			
Factor 2	Between groups	5.4954163	13	0.42272433	1.14	0.3212	Failed to Reject Ho
	Within groups	105.635973	286	0.36935655			
	Total	**111.131389**	**299**	**0.37167689**			
Factor 3	Between groups	3.87470474	13	0.29805421	0.99	0.4609	Failed to Reject Ho
	Within groups	86.0893852	286	0.30101184			
	Total	**89.96409**	**299**	**0.30088324**			
Factor 4	Between groups	5.65054865	13	0.43465759	1.14	0.3243	Failed to Reject Ho
	Within groups	108.98048	286	0.38105063			
	Total	**114.631029**	**299**	**0.38338137**			

Table 9 compares the four factors representing different groups or conditions. The "Between groups" section assesses the variability between groups for each factor, while the "Within groups" section measures the variability within each group. The F-statistic compares between-groups and within-groups variability, with higher F-values indicating larger differences. The p-value indicates the probability of observing an extreme F-ratio, and a p-value less than 0.05 implies "Reject Ho," indicating significant differences between groups. The "Mean Square" for each factor estimates population variance, with larger values indicating a larger effect size.

Table 9: Building Future-Ready for Digital Transformation when grouped by shared values under 7s McKinsey Framework

Shared Values	Source	SS	df	MS	F	Prob > F	Decision on Ho
Factor 1	Between groups	49.5165738	17	2.91273964	17.79	0.0000	Reject Ho
	Within groups	46.1747372	282	0.1637402			
	Total	**95.691311**	**299**	**0.32003783**			
Factor 2	Between groups	65.9970534	17	3.88217961	24.26	0.0000	Reject Ho
	Within groups	45.1343357	282	0.16005084			
	Total	**111.131389**	**299**	**0.37167689**			
Factor 3	Between groups	61.7836201	17	3.63433059	36.37	0.0000	Reject Ho
	Within groups	28.1804699	282	0.09993074			
	Total	**89.96409**	**299**	**0.30088324**			
Factor 4	Between groups	109.049376	17	6.41466916	324.09	0.0000	Reject Ho
	Within groups	5.58165306	282	0.0197931			
	Total	**114.631029**	**299**	**0.38338137**			

Table 10 provides a four-way analysis of variance (ANOVA) comparing four factors representing different groups or conditions. The analysis assesses between-groups variability and within-groups variability, with higher F-values indicating larger differences. The p-value indicates the probability of observing an extreme F-ratio, assuming the null hypothesis (Ho) is true. If the p-value is less than 0.05, it implies "Reject Ho," suggesting significant differences between groups for that factor. The results suggest substantial and statistically significant differences between the groups represented by each factor, providing valuable insights into the variability and significance of the factors in relation to the "Skills" variable.

Table 10: Building Future-Ready for Digital Transformation when grouped by skills under 7s McKinsey Framework

Skills	Source	SS	df	MS	F	Prob > F	Decision on Ho
Factor 1	Between groups	47.5257497	16	2.97035936	17.45	0.0000	Reject Ho
	Within groups	48.1655613	283	0.17019633			
	Total	**95.691311**	**299**	**0.32003783**			
Factor 2	Between groups	76.4277082	16	4.77673176	38.95	0.0000	Reject Ho
	Within groups	34.7036809	283	0.12262785			
	Total	**111.131389**	**299**	**0.37167689**			
Factor 3	Between groups	69.5911912	16	4.34944945	60.42	0.0000	Reject Ho
	Within groups	20.3728988	283	0.07198904			

	Total	**89.96409**	**299**	**0.30088324**			
Factor 4	Between groups	77.8335981	16	4.86459988	37.41	0.0000	Reject Ho
	Within groups	36.7974307	283	0.13002626			
	Total	**114.631029**	**299**	**0.38338137**			

Table 11 compares four factors (Factor 1, Factor 2, Factor 3, Factor 4) representing different groups or conditions related to the variable "Style." The "Between groups" section assesses the variability between groups for each factor, while the "Within groups" section measures the variability within each group. The F-statistic compares between-groups and within-groups variability, with higher F-values indicating larger differences. The decision on the null hypothesis depends on the p-value, with a p-value less than 0.05 indicating "Reject Ho." The findings suggest substantial and statistically significant differences between groups, providing valuable insights into the variability and significance of the factors studied in relation to style preferences or characteristics.

Table 11: Building Future-Ready for Digital Transformation when grouped by style under 7s McKinsey Framework

Style	Source	SS	df	MS	F	Prob > F	Decision on Ho
Factor 1	Between groups	51.5394244	17	3.03173084	19.36	0.0000	Reject Ho
	Within groups	44.1518867	282	0.15656697			
	Total	**95.691311**	**299**	**0.32003783**			
Factor 2	Between groups	75.0925063	17	4.41720625	34.56	0.0000	Reject Ho
	Within groups	36.0388828	282	0.12779746			
	Total	**111.131389**	**299**	**0.37167689**			
Factor 3	Between groups	65.6546372	17	3.86203748	44.8	0.0000	Reject Ho
	Within groups	24.3094528	282	0.08620373			
	Total	**89.96409**	**299**	**0.30088324**			
Factor 4	Between groups	74.1217039	17	4.36010023	30.35	0.0000	Reject Ho
	Within groups	40.5093249	282	0.14365009			
	Total	**114.631029**	**299**	**0.38338137**			

Table 12 compares the four factors (Factor 1, Factor 2, Factor 3, Factor 4) representing different groups or conditions related to the variable "Staff." The "Between groups" section assesses the variability between the means of each factor, while the "Within groups" section measures the variability within each group. The F-statistic compares the ratio of between-groups variability to within-groups variability, with higher F-values indicating larger differences. The decision on the null hypothesis depends on the p-value, with a p-value less than 0.05 indicating "Reject Ho." The findings suggest substantial and statistically significant differences between the groups represented by each factor in relation to the "Staff" variable.

Table 12: Building Future-Ready for Digital Transformation when grouped by staff under 7s McKinsey Framework

Staff	Source	SS	df	MS	F	Prob > F	Decision on Ho
Factor 1	Between groups	50.9186793	21	2.42469901	15.06	0.0000	Reject Ho
	Within groups	44.7726318	278	0.16105263			
	Total	**95.691311**	**299**	**0.32003783**			
Factor 2	Between groups	77.0054318	21	3.66692532	29.87	0.0000	Reject Ho
	Within groups	34.1259573	278	0.12275524			
	Total	**111.131389**	**299**	**0.37167689**			
Factor 3	Between groups	76.1660733	21	3.62695587	73.08	0.0000	Reject Ho
	Within groups	13.7980166	278	0.04963315			
	Total	**89.96409**	**299**	**0.30088324**			
Factor 4	Between groups	85.4580225	21	4.06942964	38.78	0.0000	Reject Ho
	Within groups	29.1730063	278	0.10493887			
	Total	**114.631029**	**299**	**0.38338137**			

To conclude, the analysis of organizational variables, including structure, style, skills, strategy, system, shared values, and staff, has revealed a complex interplay of factors. The rejection of the null hypothesis across factors indicates the diverse influences on observed variability, emphasizing the need for adaptive approaches. The analysis of organizational skills also highlights the importance of recognizing and fostering a spectrum of skills within the framework. The analysis of organizational strategy also highlights the substantial impact of each factor on strategic considerations. The analysis of organizational systems also highlights the complexity of structures and processes. The analysis of shared values further emphasizes the varied influences within the organization. The findings serve as a foundation for targeted interventions, informed strategies, and continuous exploration of organizational dynamics.

6. Summary

With the majority of HEIs emphasizing technology integration, hierarchical organizational structures, and fragmented digital operations systems, the McKinsey 7S Framework is moderately to highly prevalent in participating institutions. Although quality education and innovation are valued by both parties, there are implementation gaps. Although digital technology skills are growing, traditional competencies are still used for staffing. Transformational and participatory leadership styles are used.

The most important elements influencing adaptation, according to the analysis, were leadership style, system effectiveness, strategic clarity, and the development of digital skills. Stakeholders' buy-in was higher and transitions went more smoothly for organizations with well-defined digital transformation strategies, strong ICT systems, and innovative leaders. The ability to incorporate new technologies was greatly impacted by the availability of trained personnel and ongoing professional development initiatives. Furthermore, a more resilient organizational culture toward change was promoted by shared institutional values that placed a high priority on flexibility and

teamwork. However, some staff members' resistance, a lack of ICT infrastructure, and resource limitations were mentioned as obstacles.

When institutions were grouped based on profile variables like size, type, and accreditation level, statistical tests showed significant differences in some 7S elements. In comparison to smaller and less accredited institutions, larger institutions and those with higher accreditation status typically had more sophisticated systems, more defined strategies, and better-equipped staff. In general, private higher education institutions demonstrated greater adaptability when implementing new systems, whereas public institutions experienced longer bureaucratic procedures but benefited from greater alignment with national digitalization policies. Adaptation was also impacted by geographic location, with urban HEIs having easier access to ICT infrastructure than their rural counterparts.

6.1 Recommendations

Based on the findings, the following were recommended:

1) Customize training programs to meet the unique needs and characteristics of each institution, considering their unique challenges and requirements
2) Conducting a comprehensive needs assessment is necessary to identify the necessary skills and competencies for each institution type, enabling the creation of tailored training programs.
3) Provide training in diverse formats, like in-person workshops, online courses, webinars, or a combination, to cater to the diverse needs of different institutions.
4) Develop effective communication strategies to effectively communicate the significance of relevant training to various institutions, emphasizing its unique benefits and outcomes.
5) Facilitate knowledge-sharing among various institutions to exchange best practices and insights, promoting a more collaborative approach to training and development.
6) Benchmark similar institutions that have successfully implemented training programs and identify successful strategies and practices that can be adapted to each institution's specific context.

Conflict of Interest Statement

The author declares no conflicts of interest.

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