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Students' Perception of Digital Transformation in Higher Education: A Study on Learning, Employability and Adaptability

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The digital transformation has advanced globally, reshaping how students learn, communicate and get ready for the workforce. This empirical study looks at students' perception on digital transformation in higher education with special focus on learning, employability and adaptability. Employing a structured questionnaire, responses were collected from students of higher educational institutions. Descriptive statistics and correlation analysis are used to study the relationship between digital transformation and student development outcomes. Results show that digital transformation has a favourable impact on students' educational experiences, increases their employability and improves their ability to adapt to changing surroundings. By emphasising the significance of digital education in creating a generation prepared for the future, the study advances the more general objectives of economic resilience, sustainable development and efficient educational governance.

Keywords: Higher Education, Digital Transformation, Learning, Employability, Resilient Economy, Adaptability, Sustainability

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1. Introduction

Higher education in India is undergoing a rapid digital transformation, which is no longer only a response to disruption but a strategic necessity. Indian institutions are rethinking pedagogy, infrastructure and access for a new digital ecosystem through programs like the National Education Policy (NEP 2020) and the widespread adoption of EdTech platforms. According to research by **(Vaibhav & Chakraborty, 2024)** in the EdTech setting, Indian students' acceptance of technology is strongly influenced by their functional, epistemic and social values. In a similar way **(Bhatia, 2023)** detailed how the COVID-19 pandemic sped up the adoption of digital technology in Indian higher education while simultaneously highlighting inadequacies in infrastructure, teacher preparedness and access equity. These developments highlight the way in which inclusive access and institutional governance, two essential components of sustainable educational systems, intersect with digital transformation.

The significance of student views becomes paramount in this scenario. A persistent issue in Indian higher education has been employability, as demonstrated by **(Kumar & Singh, 2025)** many graduates still lack soft and digital skills that are necessary for the workforce, even after changes. (Kem, 2025) examined the importance of digital learning and innovation platforms in India for bridging skill gaps and building a resilient workforce. Therefore, student impressions of digital tools, their ability to adjust to new learning styles and the effect these have on their employability not only reflect individual outcomes but also indicate the efficiency of institutional governance and the economic resiliency of the country. The present study, which consists of students' responses, explores how digital transformation in higher education effects learning experiences, employability skills and adaptability, all of which support the more general objectives of sustainability, sound governance and a resilient economy.

2. Review of Literature

Bast (2021) investigated Indian students' attitudes towards online education. There were notable differences in digital literacy and access between learners in urban and rural areas.

Dheesha (2022), according to her study, e-learning promotes 21st century abilities like problem-solving and teamwork as long as pedagogical quality is balanced with technology. Singh and Das (2022), according to their study, when digital pedagogy is regularly incorporated inro curriculum, it improves employability skills like critical thinking and communication. Mishra (2023) noted that employer-aligned and scalable curricula were made possible by digital technology but warned that to achieve significant change, Indian universities need to improve faculty preparedness and governance. Patel and Sharma (2023) have shown that Indian students were adapted to digital learning after COVID, but institutional support and blended learning were necessary for their sustained participation.

3. Research Gap

The adoption and efficacy of digital transformation in higher education have been examined in recent Indian studies (Aaradhi & Chakraborty, 2024; Misra, 2023; Patel & Sharma, 2023). The majority of these studies have concentrated on institutional preparedness, teacher perspectives or technology adoption framework rather than student's perception. Few empirical research combines learning, employability and adaptability to comprehend students' comprehensive response to digital change in Indian higher education and existing literature frequently isolates particular outcomes like learning experience or employability.

Additionally, there is a dearth of empirical evidence from Indian colleges, particularly after the epidemic, that evaluates how students view the long-term advantages of digital learning with regard to skill development and employability. Therefore, there exist a gap in the use of quantitative primary data for a thorough analysis of students' perception across these three aspects.

4. Objectives of the Study

The objectives of the study are as follows –

- To examine students' perception on digital transformation in enhancing their learning experience.

- To analyse the impact of digital transformation on students' employability skills.

- To analyse the relationship between digital transformation and students; adaptability to change.

5. Research Hypotheses

H₀₁: There is no significant relationship between digital transformation and students' learning experience.

H₀₂: There is no significant impact of digital transformation on students' employability skills.

H₀₃: There is no significant relationship between digital transformation and students' adaptability to change.

6. Research Methodology

Research Design- Empirical and Descriptive research design

Population and Sample- students enrolled in a higher education institution in Kolkata, while the sample size is 64 respondents (students)

Sampling Technique- nom-probability convenience sampling

Data Collection- primary data were collected using a self-administered questionnaire based on the 5-point Likert Scale

Tools for Analysis- Descriptive (mean and S.D) and inferential statistics (Correlation) using SPSS.

7. Findings of the Study

Descriptive Statistics

The descriptive statistics were used to understand students' overall perception of digital transformation in higher education. The analysis focused on four constructs, which are as follows:

Table 1: Descriptive Statistics

Construct	Mean	Std. Deviation	N
Learning Enhancement	3.7937	.87720	64
Employability	3.1594	.83509	64
Adaptability	3.0906	.79036	64
Instutional Support and Sustainability	3.4562	.84212	64

As per the above table-1the highest mean for learning enhancement **(= 3.7937)** suggest that students typically view digital tools as helpful for increasing access and engagement.

Institutional support also shows a favourable mean score **(= 3.4562)** but there is still scope for better connectivity, training and faculty support, while employability and adaptability mean **(= 3.1594 & 3.0906)** were rated slightly lower, suggesting that students believe there is still an opportunity for improvement in adapting digital learning to real-world professional contexts.

Table 2: Karl Pearson Correlation

Construct		Learning Enhancement	Employability	Adaptability	Institutional support and sustainability
Learning enhancement	Pearson Correlation	1	.597**	.544**	.535**
	Sig. (2-tailed)		.000	.000	.000
	N	64	64	64	64
Employability	Pearson Correlation	.597**	1	.647**	.634**
	Sig. (2-tailed)	.000		.000	.000
	N	64	64	64	64
Adaptability	Pearson Correlation	.544**	.647**	1	.502**
	Sig. (2-tailed)	.000	.000		.000
	N	64	64	64	64
Instutional support and sustainability	Pearson Correlation	.535**	.634**	.502**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	64	64	64	64

**Correlation is significant at the 0.01 level (2-tailed)

The Karl Pearson Correlation revealed significant positive relationships among all constructs at the 0.01 level (2-tailed). As per the above table-2,

- Learning enhancement is correlated significantly with employability(r=0.597), adaptability (r=0.544) and institutional support & sustainability (r= 0.535).

- Employability showed strong correlations with learning enhancement (r=1), adaptability (r=0.647), institutional support & sustainability (r=0.634).

- Adaptability showed positive correlation with learning enhancement (r=0.544), employability (r=0.64), institutional support & sustainability (r=0.502).

- Institutional support and sustainability also correlated positively with learning enhancement (r=0.535), employability (r=0.634), and adaptability (0.502).

Table 3: Hypothesis Testing

Hypothesis	Variables Tested	Correlation (r)	P-value	Decision	Interpretation
H_{o1}	Learning Enhancement-Employability	0.597	<0.001	Rejected	There is a significant relationship b/w learning enhancement and employability
H_{o2}	Learning Enhancement-Adaptability	0.544	<0.001	Rejected	There is a significant relationship b/w learning enhancement and adaptability
H_{o3}	Learning Enhancement-Institutional Support & Sustainability	0.534	<0.001	Rejected	There is significant relationship b/w learning enhancement and institutional support & sustainability

Source: Researcher's compilation or surveyed data

At the significance level of 0.001, all null hypotheses were rejected. This suggests that learning, employability, adaptability and institutional support & sustainability are all strongly and favourably impacted by digital transformation. The findings demonstrate that students' preparedness for the technology-advanced academic and professional environment is significantly influenced by increased institutional support, digital access and teacher engagement.

Figure 1: Scatter Plot
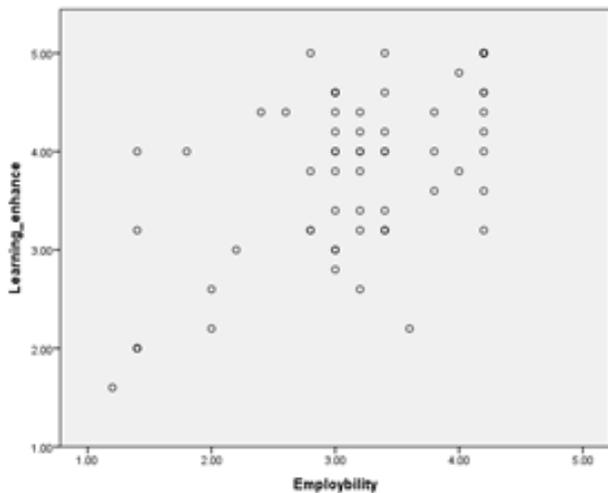
1. Scatter Plot Between Learning Enhancement and Employability

There is a clear positive linear trend in the scatter plot that illustrates the relationship between learning enhancement and employability. Most of the data points are concentrated along an upward sloping line, suggesting that students who report higher levels of engagement with digital learning also perceive a greater improvement in employability skills like teamwork, communication and problem solving.

Figure 2: Scatter Plot
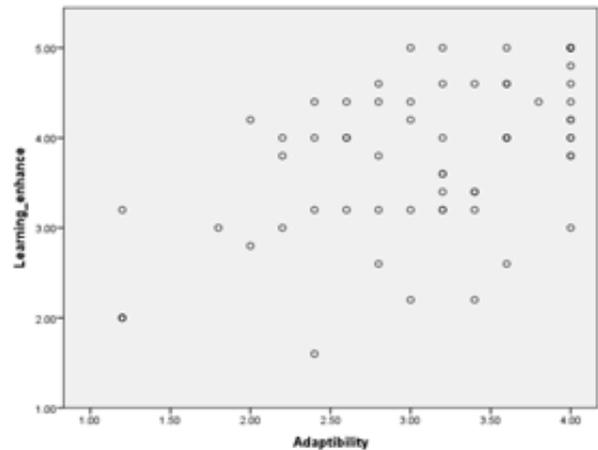
2. Scatter Plot Between Learning Enhancement and Adaptability

There is a moderate to large positive correlation between learning enhancement and adaptability. A distinct diagonal pattern is formed by the data points gentle to upward slope. This suggests that students are more likely to successfully adjust to new digital tools, online platforms and technology-based evaluations.

8. Conclusion

The study comes to the conclusion that with the help of robust institutional processes, digital transformation in Indian higher education greatly improves students' learning experiences, employability and adaptability. The correlations (r=0.050-0.65, P<0.001) confirm that learning enhances technological preparedness and skill development, which are essential elements of a robust and sustainable educational system.

Although students emphasise the ongoing need for better infrastructure, teacher leadership and inclusive access also generally view digital transition as helpful.

Practical Implications

- Higher Education Institution- to improve learning effectiveness and employability outcomes, faculty training and digital infrastructure (LMS, broadband, connectivity, digital libraries) must be strengthened.

- Curriculum Designers and Faculty- the gap between academic learning and practical abilities can be filled by integrating virtual teamwork courses and digital project-based learning.
- Policy makers- to guarantee inclusivity and sustainability, educational organisations like AICTE and UGC should keep supporting digital India Projects with fair access.
- Students- students' employability and adaptability in technologically advanced settings can be enhanced by ongoing use of digital tools and self-directed platforms.

Limitations of the Study

The limitations of the study are as follows -

- Generalisations to larger population of higher education is limited by the sample size of 64 respondents.
- Convenience sampling was used to gather the data which could create biasness.
- Instead of using performance measurement the study uses self-reported perceptions.
- Institutional-level insights were limited by the exclusion of faculty and administrator viewpoints.

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