From Traditional to Digital Classrooms: Faculty Satisfaction with Digital Pedagogical Practices in Higher Education

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Abstract
This study investigates faculty satisfaction with digital pedagogical practices in higher education, focusing on technological infrastructure, institutional support, training, workload, and perceived teaching effectiveness. A cross-sectional survey design collected data from 50 faculty members using a structured questionnaire based on a five-point Likert scale. Likert scale analysis, ANOVA test, and Multiple regression analysis were employed using Jamovi software. Overall faculty satisfaction was considered the dependent variable, and digital infrastructure and training programs were treated as independent variables. The regression model explained 29.7% of the variance in satisfaction ($R^2 = 0.297$). A one-way ANOVA was conducted to examine whether the overall satisfaction of faculty members differed significantly across the teaching experience groups. The result indicates that there was no significant difference in satisfaction among the three groups, $F(2, 26.0) = 0.995$, $p = 0.383$. The Likert scale analysis revealed that out of 50 faculty members. The mean score for this statement was 3.90, which corresponds to the "Agree" category on the five-point Likert scale. Generally hold a positive perception regarding the availability of digital infrastructure in their institution.

Keywords: **Faculty Satisfaction, Digital Pedagogy, Higher Education, Online Teaching, Institutional Support**

Introduction

Higher education systems worldwide are undergoing a significant transformation as traditional classroom-based instruction increasingly integrates digital technologies. The rapid advancement of information and communication technologies, coupled with the growing demand for flexible and learner-centred education, has accelerated the shift from conventional teaching methods to digital and blended pedagogical models. This transition has been further intensified by institutional reforms and external disruptions, prompting higher education institutions to adopt digital classrooms as a strategic necessity rather than an optional innovation.

Digital pedagogical practices—such as learning management systems, virtual classrooms, multimedia content, and online assessment tools—have reshaped teaching and learning processes. While these technologies offer opportunities for enhanced accessibility, collaboration, and instructional efficiency, their successful implementation largely depends on faculty acceptance and satisfaction. Faculty members play a role in designing, delivering, and sustaining digital learning environments, making their perceptions and experiences critical to the effectiveness of digital pedagogy in higher education.

Faculty satisfaction with digital pedagogical practices is influenced by multiple factors, including technological infrastructure, institutional support, professional training, workload management, and perceived teaching effectiveness. A positive level of satisfaction can lead to improved instructional quality, greater innovation in teaching practices, and stronger student engagement. Conversely, inadequate support or technological challenges may result in resistance, stress, and reduced teaching effectiveness.

In this context, the present study examines faculty satisfaction with digital pedagogical practices in higher education, focusing on the transition from traditional to digital classrooms. By identifying the factors that influence faculty satisfaction and the challenges encountered during digital adoption, the study aims to provide insights to help institutions in developing effective digital teaching strategies and enhancing faculty engagement in the evolving educational landscape.

Literature Review

1. "The use of digital technologies in the classroom: A teaching and learning perspective" Christopher Buzzard, Victoria L Crittenden, William F Crittenden, Paulette McCarty. *Journal of Marketing Education 33 (2),* 131-139, 2011. "Although students use many digital tools, they prefer traditional methods for learning, while teachers prefer university-provided technology.
2. "Student perceptions of educational technology tools" Irvine Clarke III, Theresa B Flaherty, Sandra Mottner. *Journal of Marketing Education 23 (3),* 169-177, 2001. The results show that students have different opinions about how educational technology affects their learning, job chances, and future job performance.
3. "Online higher education: Faculty satisfaction and its antecedents" Lisa T Stickney, Regina F Bento, Anil Aggarwal, Veena Adlakha. *Journal of Management Education 43 (5),* 509-542, 2019. Online teaching faculty are generally satisfied, especially when they receive training and have flexible schedules, while institutional support has a smaller effect, and stronger technical support is linked to lower overall satisfaction.
4. "Digital learning, mediating effect of instructor facility on student satisfaction at universities", Gunja Kumari Sah. *Journal of Digital Learning and Education 4 (3),* 237-256, 2024. Students were satisfied when they had access to digital portals, technology facilities, knowledgeable instructors, and supportive institutional systems.
5. "Teachers' satisfaction, role, and digital literacy during the COVID-19 pandemic", Ming Li, Zhonggen Yu. *Sustainability 14 (3),* 1121, 2022. It is necessary to conduct a blended teaching model in educational institutes.
6. "Digital transformation in German higher education: student and teacher perceptions and usage of digital media" Melissa Bond, Victoria I Marín, Carina Dolch, Svenja Bedenlier, Olaf Zawacki-Richter. *International journal of educational technologies in higher education 15 (1),* 1-20, 2018. Findings reveal that both teachers and students use a limited number of digital technologies for predominantly assimilative tasks.
7. "Online teaching methods and student satisfaction during a pandemic", Anita Kéri, *International Journal of Educational and Pedagogical Sciences 15 (4).* pp. 369-375. (2021). Results show that students are most satisfied with their teachers' competence and preparedness, but least satisfied with the quality of online classes.
8. "E-Teaching in higher education: An innovative pedagogy to generate digitally competent students at King Khalid University" Shadma Iffat Rahmatullah, Sufia Sultana, Ghazala Sultan. The analysis indicates the necessity of appropriate training for e-teachers to handle the unexpected situations that occur during the teaching or evaluation process.
9. "A model for assessing student satisfaction with smart classroom environment in higher education", Zhicheng Dai, Ling Wang, Xian Peng, Liang Zhao, Junxia Xiong. *Journal of Computer Assisted Learning*

40 (6), 2901-2916, 2024. The results showed that students had a high level of satisfaction with the smart classroom environment.

10. "Smart classroom learning environment preferences of higher education teachers and students in China: An ecological perspective" Zhicheng Dai, Junxia Xiong, Liang Zhao, Xiaoliang Zhu. *Heliyon 9 (6),* 2023. The results showed that teachers and students had a positive attitude towards the smart learning environment.

Research Objectives

- Assess overall faculty satisfaction with digital pedagogical practices.
- Examine the influence of institutional support factors (technical, training, workload) on satisfaction.

Research Methodology

Research Design

The study uses a descriptive and analytical research design to assess faculty satisfaction with digital pedagogical practices in higher education. This approach helps to understand faculty perceptions, experiences, and the factors influencing satisfaction during the shift from traditional to digital classrooms.

Population of the Study

The population for the study consists of faculty members working in higher education institutions, including private and autonomous colleges, who have experience using digital pedagogical tools for teaching.

Sample and Sampling Technique

A sample of 50 faculty members was selected through simple random sampling to ensure fair representation across disciplines and academic ranks. The sample included faculty with varying levels of teaching experience and digital exposure.

Sources of Data

Primary Data: Primary data were collected through a structured questionnaire administered to faculty members.

Secondary Data: Secondary data were obtained from research articles, journals, books, reports, and institutional documents related to digital pedagogy and faculty satisfaction.

Tools for Data Analysis

The collected data were analyzed using statistical software such as Jamovi. The following statistical tools were used:

Likert Scale Analysis: This scale is used to measure whether the institution provides adequate digital infrastructure.

ANOVA: Anova was conducted to examine differences in overall satisfaction based on teaching experience.

Regression Analysis: This study conducted Multiple linear regression analysis to examine the influence of digital infrastructure and training-related factors on overall faculty satisfaction.

Research Instrument

A structured questionnaire was developed based on existing literature and validated scales. The questionnaire comprised five sections:

- Demographic profile of respondents.
- Adoption of digital pedagogical tools.

- Faculty perceptions of digital teaching effectiveness.
- Factors influencing faculty satisfaction (training, infrastructure, institutional support).
- Challenges faced in digital pedagogical practices.

Responses were measured using a five-point Likert scale ranging from "Strongly Disagree" (1) to "Strongly Agree" (5)

Findings and Result

Likert Scale Analysis

Table 1 Shows the Perception of Faculty Members Regarding Whether the Institution Provides Adequate Digital Infrastructure

Respondence Category	Score	Frequency	Percentage	x
Strongly Agree	5	17	34%	5
Agree	4	16	32%	4
Neutral	3	13	26%	9
Disagree	2	3	6%	
Strongly Disagree	1	1	2%	
Total		50	100%	95

Likert scale = (∑fx)/(Number of respondents) = 195/50 = 3.90

Interpretation

The above table, it shows that faculty members agreed that their institutions provide adequate digital infrastructure.

One-Way Anova

Table 2 Shows Whether there are Any Differences in Overall Satisfaction Based on Teaching Experience

One-Way ANOVA (Welch's)				
	F	df1	df2	p
Overall Satisfaction	0.995	2	26.0	383

Group Descriptive					
	Teaching Experience	N	Mean	SD	SE
Overall Satisfaction	5-10 years	19	4.42	1.12	0.257
	Above 10 years	12	4.17	1.53	0.441
	Below 5 years	19	3.89	1.15	0.264

Interpretation

A one-way ANOVA (Welch's test) was conducted to examine whether overall faculty satisfaction differs significantly based on teaching experience. The results of the analysis revealed that there was no statistically significant difference in overall satisfaction among faculty members with different levels of teaching experience, $F(2, 26.0) = 0.995$, $p = 0.383$. Since the p-value (0.383) is greater than the standard significance level of 0.05, the null hypothesis cannot be rejected. Hence, teaching experience does not significantly influence overall faculty satisfaction.

Linear Regression

Table 3 Shows the Influence of Digital Infrastructure and Training Program-Related Factors on Overall Faculty Satisfaction

Model Fit Measures			
Model	R	R^2	Adjusted R^2
1	0.545	0.297	0.252

Note. Models estimated using a sample size of N=50

Model Coefficients - Overall Satisfaction				
Predictor	Estimate	SE	t	P
Intercept	1.4990	0.675	2.222	.031
My Institution Provides Adequate Digital Infrastructure.	0.0465	0.223	0.209	.835
Training programs were provided to improve digital teaching skills.	0.2501	0.176	1.423	.161
Training Programs Help Me Manage Workload Efficiently In Digital Classrooms.	0.3794	0.175	2.167	035

Interpretation

The study conducted a multiple linear regression analysis to examine the influence of digital infrastructure and training-related factors on overall faculty satisfaction. The regression model explained 29.7% of the variance in satisfaction ($R^2 = 0.297$).

Limitations of the Study

The study may involve a limited number of faculty members, which could potentially limit the generalizability of the findings to all higher education institutions.

Data collected from a specific region or institution may not reflect the experiences of faculty in other regions or educational systems.

The study focuses only on faculty satisfaction and does not include student feedback. Since student opinions were not included in the study. It shows only how faculty feel about digital pedagogy and not how effective it is for students. This could provide a more holistic understanding of digital pedagogy effectiveness.

Conclusion

The study highlights that the shift from traditional to digital classrooms has significantly influenced faculty pedagogical practices and satisfaction in higher education. Digital pedagogy offers flexibility, enhanced access to resources, and opportunities for innovative teaching; however, faculty satisfaction largely depends on institutional support, technological infrastructure, and continuous professional development. The findings indicate that adequate training and technical assistance improve faculty confidence and acceptance of digital tools, while challenges such as increased workload and varying digital competencies persist. The study concludes that digital pedagogy is most effective when integrated with traditional teaching methods rather than viewed as a complete replacement. Strengthening institutional support mechanisms and capacity-building initiatives is essential for ensuring sustainable and satisfactory digital transformation in higher education.

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