APPLICATION OF DISCRIMINANT FUNCTION ANALYSIS IN TEACHING METHODOLOGY

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ABSTRACT

It's no secret that technology has drastically changed the landscape of education. While there are pros and cons to both teaching with and without technology in higher education, it's important to be able to discriminate between the two to best serve students. This research paper will explore the differences between teaching with and without technology in higher education. The study applied a discriminant function to discriminate between teaching with and without technology in higher education. Hence, the need to identify the variables that could help discriminate against the faculty's intention to adopt new teaching methodologies for better teaching and learning. It is expected that faculty will have a higher preference for the adoption of technology in teaching when institutes provide good facilities so they can cultivate habits while teaching and perceive value while teaching with technology. The unified theory of acceptance and use of technology constructs (performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, and habits) discriminates between teaching with and without technology in higher education. The study recommended that performance expectancy, habit, and facilitating conditions are strong predictors for the adoption of teaching with technology. The study's findings will be beneficial to all faculty members who intend to use technology in their instruction, allowing them to provide students with a more practical, real-world education that will better prepare them for the workforce.

Keywords: Discriminant Analysis, Faculty, Technology, UTAUT

INTRODUCTION

In the last two-decade, various studies have determined the effect of educational technologies have been advocated in higher education with respect to having the capacity to improve teaching and learning (Gomez & Trespalacios, 2022). There is little evidence in higher education revolution facilitated by educational technologies (Foulger, 2021). There is also a growing need for research to account for the distinct "technology disconnect" between enthusiastic rhetoric and the rather uninspiring reality of university education technology use (Zaguia, 2021), as well as to plan and develop strategies in order to facilitate the implementation of educational technologies in

higher education to improve student learning (Wang, 2021). Technology has the potential to transform the traditional teaching and learning processes. It can also help to eliminate geographical and time-based educational barriers (Wang *et al*., 2022), allowing for increased access. In addition to this, in order to learn from same instructor students no longer need to be co-located. Modern technology can drastically alter the perception of a higher education institution. A physical facility with classrooms where students come to pursue their studies is no longer essential for a higher education institution.

The capacity of faculty to know why, when, and how best to utilize educational technologies has been acknowledged as an important influencer in the successful deployment of educational technologies in higher education. (Zhang & Ren, 2022). However, teacher adoption of educational technologies is a complicated process driven by various external and internal factors (Du, Y., & Gao, H, 2022). Much of the research has focused on the factors responsible for technology adoption by faculty or students in teaching and learning. However, less attention has been paid to the factors responsible for promoting and inhibiting technologies' uses in teaching methodology (Ergulec & Misirli, 2022). Thus, a technique that could provide discriminant between which factors are responsible for teaching with technology and teaching without technology would significantly benefit policymakers or academia to integrate technologies into the current pedagogy in teaching and learning.

Because of technology intervention after Covid 19, faculty are now forced to adopt technology in teaching; however, an IMI survey revealed that 60 per cent of faculty are still hesitant to adopt technology in teaching. So, what are the factors that distinguish those faculty who have a high intention to adopt technology in teaching from those who have a low intention to adopt technology in teaching. Objective can therefore be restated as follows: -

1. To identify factors that discriminant between teaching with technology and teaching without technology.
2. To formulate the discriminant function by using most significant variables that will classify between two groups.
3. To identify which variables are more strongly classifying between teaching with and without technology.

LITERATURE REVIEW

Several studies have examined (Voskoglou & Salem, 2020) how instructors have begun incorporating information and communication technology (ICT) into their teaching practices. Traditionally, research into the causes of minimal technology integration has focused on post-teacher-education hurdles (Sobirova & Karimova, 2021) develop a diagrammatic conception to express and represent the complex interaction of a teacher's knowledge, objectives, and beliefs in effectively using technology in the classroom. According to research (Jobirovich, 2021), positive attitudes, ability, and access to technological tools are necessary for an instructor to integrate information technology into the classroom successfully. Many researchers have developed a well-known theoretical framework that explains why instructors are more likely to use ICT in the classroom (Azizah *et al*., 2021). Several studies explore the benefits and drawbacks of using social networking tools (Zilka, 2021) in classrooms and describe how to arrange activities using technology inside the classroom. The results of this study imply that contextual learning theory could be a helpful structure for educating faculty (Bariu, T. N., 2020). Some studies also explored a comprehensive approach to technology-based innovations in education (Hennessy *et al*., 2013) that can help all students receive a high-quality education. According to a qualitative study Bachmann, (1997), learning strategies for incorporating technology into their teaching go beyond what institution officials frequently consider when educating faculty for their learning.

More recent work by research scholar (Gomez *et al*., 2022) looks at self-efficacy as a determinant in instructors' technology use and classroom integration. By integrating technology, the work offers students and faculty' significance in promoting technology integration in preparation programs (Foulger *et al*., 2021). The fundamental goal of Zaguia *et al*. (2021) was to create and give a paradigm for philosophical teaching and assist and engage in learning activities. Technology like gamification, webcasting, virtual reality, and

simulators and their uses in education will improve students' skills (Wang *et al*., 2021). The main goal of integrating technology into current pedagogy (Ergulec *et al*., 2022) was to examine the viewpoints of instructors and faculty on using this platform. More research is needed to understand the main barriers to integrating technology in the classroom, such as faculty' training programs, lack of awareness, self-efficacy, hedonic motivation, and the inability to use new teaching methodologies (Zhang *et al*., 2022). However, this topic needs further investigation into the impact of new tools and technology on the teaching and curriculum in educational institutes and the development of a virtual teaching model appropriate for the college teaching system (Wang *et al*., 2022).

Researchers and practitioners have paid close attention to technology acceptance and adoption over the last two decades. The UTAUT model aims to determine how users intend to use an information system and how they utilize. The main constructs of UTAUT model are performance expectancy, effort expectancy, social influence, and facilitating conditions, and three constructs were added later, such as habit, price value, and hedonic motivation (Venkatesh *et al*., 2012). The degree to which a user believes technology will help them improve their performance in the classroom is measured by performance expectancy. The degree of ease of use is measured by effort expectancy. Faculty will be more likely to use and adopt technology in the classroom if they find it more accessible. The degree to which a teacher believes that the other faculty, administrators, staff, or students influenced will force them to use technology in the classroom is referred to as social influence. The facilitating condition is the teacher's belief that institutions will support and provide infrastructure to aid in using technology in the class setup. Hedonic motivation influences a educationalist pleasure and fun in their willingness to use new age technology. Perceived value refers to the cognitive trade-off made by the teacher between the perceived benefits and the learning time. The teacher's habit reflects the impact of previous experiences with technology in the classroom and the development of the habit of using technology while delivering the lecture.

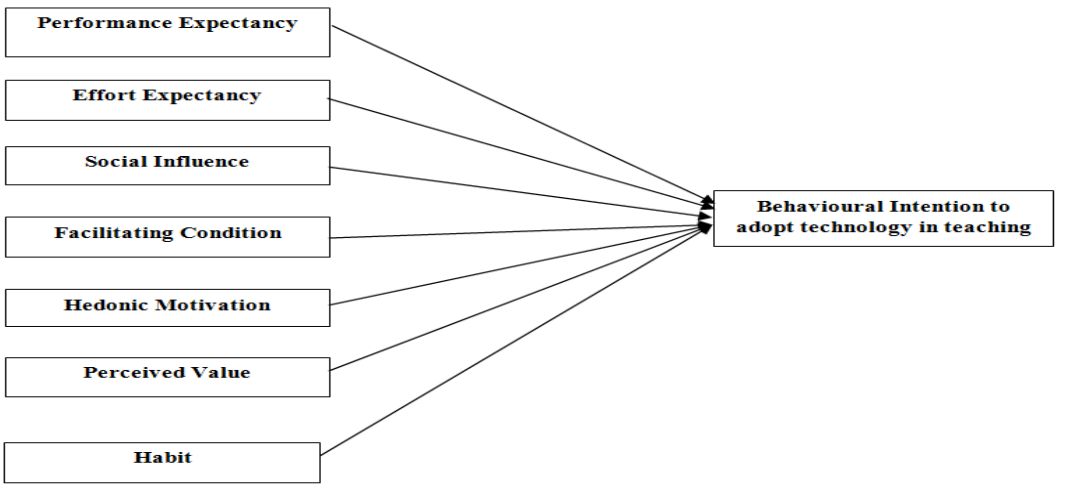

Figure 1: Conceptual Model

Research Framework

The following research framework was proposed based on seven variables (Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Condition, Hedonic Motivation, Perceived Value and Habit) that can be identified as possible discriminator between teaching with and without technology.

The study then attempts to test the effects of the aforementioned factors on knowledge sharing in an organisation. Figure 1 depicts the advancement of a research model for further investigation. Seven hypotheses were developed based on the research framework, as illustrated below:

In the last decade, various studies have determined the role of technology in the classroom. These have

been extensively researched in the literature (Sebastián *et al*., 2022) in an attempt to demonstrate that technology can help level the playing field and provide equal access to education for all. On the contrary, some studies (Almogren, 2022) believe that relying too heavily on technology can lead to a drop in standards. However, there is one area where there is general agreement—and that is the role of performance expectancy in technology acceptance (Kang *et al*., 2022). Performance expectancy is the belief that using a particular technology will lead to improved performance. In other words, Faculty believe that using a specific technology will improve their performance in the classroom and allow them to better engage students with study materials. This belief is important because it has a significant influence on the behavioural intention to use disruptive technologies in higher education. If students believe that using a particular technology will improve their grades, then they are more likely to use it. Many studies (Zhao *et al*., 2022) found that performance expectancy was the best predictor of behavioural intention to use laptop computers for academic purposes among students. Performance expectations were found to be a significant predictor of behavioural intention to use technology for academic purposes in numerous studies. Thus, the first hypothesis is proposed.

H_1: Performance Expectancy has a significant influence on the faculty's behavioural intention to adopt technologies in teaching

Technologies are constantly emerging and altering the higher education landscape. Effort expectancy, or the perceived ease of use, is a significant factor in the adoption of these technologies. Some may view new technologies (Saidu *et al*., 2022) as daunting and difficult to use. They may believe that it will take a great deal of effort to learn the new system and integrate it into their current workflow. Others may see the new technology as simple and easy to use (Misra *et al*., 2022). They may feel that it will save them time and effort in the long run. Those who expect a lot of effort are more likely to adopt new technologies (Zhou *et al*., 2022). They are willing to put in the time and effort to learn the new system and reap the benefits it has to offer. On the other hand, those with a low effort expectancy are less likely to adopt new technologies (Chaveesuk *et al*., 2022). They may not see the value in learning something new if it requires a lot of effort on their part. The bottom line is that institutions must try to promote the ease of use of new technologies if they want them to be adopted by faculty and students alike (Meet *et al*., 2022). Simplifying processes and providing training and support will go a long way in increasing uptake rates. Thus, the second hypothesis is proposed.

H_2: Effort Expectancy has a significant influence on the faculty's behavioural intention to adopt technologies in teaching

Some researchers believe that technology can help improve teaching and learning, while others are concerned about the potential for negative effects such as distraction and cheating (Chaveesuk *et al*., 2022). However, there is one area where there is general agreement the importance of facilitating conditions for the successful adoption of new technologies. Facilitating conditions refer to the external factors that make it easier for individuals to adopt new technologies. These factors can include things like support from an institution, access to resources, and prior experience with similar technologies. In the context of higher education, facilitating conditions are particularly important because faculty members often have different levels of experience with new technologies (Meet *et al*., 2022). There is significant evidence that facilitating conditions can have a positive impact on the adoption of new technologies in higher education (Sebastián *et al*., 2022). Many studies back up the finding that faculty members at a large institute who had supportive colleagues and were trained on how to use new technology were more likely to adopt it (Zhou *et al*., 2022) than those who did not. Thus, the third hypothesis is proposed.

H_3: Facilitating Conditions has a significant influence on the faculty's behavioural intention to adopt technologies in teaching.

Social influence is one of the most important predictors of technology adoption, according to the Venkatesh studies (Saidu *et al*., 2022). In many studies, it was found that faculty were more likely to try out a new technology if they saw others around them using it and benefiting from it (Misra *et al*., 2022). In the context of higher education, this means that students are more likely to adopt new technologies if their peers are using them. Faculty members can also play a role in social influence by demonstrating the use of new technologies in their own teaching (Almogren,

2022). When faculty see that their peers and students are using a certain technology and finding it helpful, they are more likely to give it a try themselves (Kang *et al*., 2022). Thus, the fourth hypothesis is proposed.

H_4: Social Influence has a significant influence on the faculty's behavioural intention to adopt technologies in teaching

In previous studies, researchers believe that technology can help improve teaching and learning, while others are concerned about its potential to disrupt traditional ways of doing things. In many studies (Palas *et al*., 2022), researchers understand the importance of understanding what motivates teachers to accept and use new technologies. Many studies found (Suo *et al*., 2022) that faculty members who were more motivated by pleasure were more likely to accept and use new technologies. In other words, faculty who saw new technologies as a way to have more fun or make their lives easier were more likely to adopt them (Misra *et al*., 2022). This finding has important implications for educators and administrators who are looking to promote the use of new technologies in higher education (Zhou *et al*., 2022). If faculty members are to be encouraged to use new technologies, it is important to make them aware of the potential pleasure they can derive from doing so. Thus, the fifth hypothesis is proposed.

H_5: Hedonic Motivation has a significant influence on the faculty's behavioural intention to adopt technologies in teaching

Over the past two decades, a significant amount of research has been done on the role of technology in teaching. Technologies are those that have the potential to radically change the way we live, work, and learn (Meet *et al*., 2022). They often emerge in unexpected ways and can be difficult to adopt because they require us to change our existing habits and routines. In previous studies (Saidu *et al*., 2022), very few models and frameworks were built for understanding the faculty's adoption of technologies in teaching. Many researchers have shown in their studies how faculty members' perceived value of disruptive technologies affects their behavioural intention to adopt these technologies in their teaching. Perceived value is a trade-off between benefits and sacrifices (Zeithaml, 1988; Monroe, 1990). As a result, before incorporating disruptive technology into their teaching methodology, faculty should consider the benefits they will receive as well as the time and effort required to adopt new technology (Yuduang *et al*., 2022). Faculty are expected to adopt technology if they believe that the benefits of using technology to teach outweigh the sacrifice (Chaveesuk *et al*., 2022). Thus, the sixth hypothesis is proposed.

H_6: Perceived Value has a significant influence on the faculty's behavioural intention to adopt technologies in teaching

There is a considerable connection between behavior, intention, and habit in the process of adopting new technologies. Numerous studies have demonstrated that there is a significant and beneficial connection between patterns of behaviour and the intentions behind such behaviours. A habit is a previously learned behaviour that has been routinized and is carried out with little or no purpose or effort. Habits are ingrained in a person over time (Ajzen, 1991). Intentions to adopt new technologies might be significantly influenced by individuals' routines. These kinds of experiences also lessen the need for coordination, argument, or the necessity to make difficult decisions (Sebastián *et al*., 2022). For instance, a faculty member may cultivate a favourable attitude toward educational technology after using various applications related to educational technology (Almogren, 2022) for an extended period. This also applies to the situation where such an intention will influence and be stored in the conscious mind of the faculty member (Kang *et al*., 2022). The conclusion is that the seventh hypothesis should be suggested.

H_7: Habit has a significant influence on the faculty's behavioural intention to adopt technologies in teaching

RESEARCH METHODOLOGY

The sample populations are educational experts in their fields who have been using technology in the classroom for the last five years. The purposive sampling technique was used in the current study, where participants were asked to share their feedback on teaching with and without technologies. Participants were from Delhi and NCR management colleges. The linear numeric scale from 0 to 10 was used to compare the factors responsible for faculty members' technology adoption in teaching and learning. About 890 structured questionnaires were mailed to the faculty, and 662 responded. The analysis

undertaken was based on the responses of 430 respondents. In this current study, the UTAUT 2 model factors were used to form a linear function representing the difference between teaching with and without technology in teaching and learning. Discriminant analysis was used to analyse data where the dependent variable was categorical, and the independent variables were intervals. In the current study, teaching with and without technology were categorical variables, and performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, habits, and perceived value were independent variables. Discriminant analysis was used to test the sampled hypothesis. Data analysis was done on the IBM SPSS version 21 software. In the underlying study, discriminant analysis techniques were used to categorize and classify teaching methodologies into two categories, i.e., teaching with technology and teaching without technology. Because the dependent variables only contained two categories, a two-group discriminant analysis was done. Using the discriminant function's standardized and non-standardized coefficients, two classification functions were created for the two different categorical groups. Teaching with technology will fall under category one, while teaching without technology will fall under category two. Based on a linear combination of independent factors, discriminant analysis was utilized to predict group membership. The Wilks Lambda function is used to evaluate the effectiveness of the discriminant analysis function. This measure indicates a significant difference between the target groups. The Discriminant function is expressed as follows.

$DF = a1\ C1 + a2\ C2 + \ldots + ai\ Ci$

DF= Discriminant Function

a= Discriminant Coefficient

C= Independent Variable

Discriminant Analysis Assumptions

- The dependent variable categories must be mutually exclusive
- The predictors are independent of one another and are normally distributed with absence of outliers
- There is no presence of correlation among all seven predictors variables.
- The relationship between all pairs if groups are linear

This study employs the quantitative research method, which entails gathering secondary data following the variables determined in the research. The above table indicates that most respondents are female, representing 57 per cent of the sample. The respondents' average age is 39 years. The sample consisted of 23 per cent professors, 29 per cent associate professors, and 48 per cent assistant professors. 62 per cent of respondents are Ph.D. holders. Faculty with fewer than 15 years of experience account for 48 per cent of the total, while those with more than 15 years of experience account for 42 per cent. Before analyzing the data, first divide the sample into two parts. One is referred to as the analysis sample, which is typically larger in proportion to the potential smaller holdout sample. This is accomplished by splitting the sample, and then using the function we established to forecast the holdout sample to assess the predictive accuracy of the model we developed (Ramayah *et al*., 2006). With a value of 0.65, the sample is divided into a holdout sample of 35 per cent and a 65 per cent analysis sample. In Table 2, 430 samples were analyzed, with 232 being holdouts.

Testing the Assumption of Discriminant Analysis

1. Data Normality

The most important assumption for conducting discriminant analysis on a set of data is that the data are normally distributed. The normality of a dataset is determined by the Shapiro-Wilk test. If the test is non-significant at $p > 0.5$, the data has a normal distribution. In table A1 (Appendix A), all seven variables are non-statistically significant at the 0.05 alpha level, so it is assumed that they are normally distributed.

2. Absence of Outlier

An outlier is a data point that is located outside of the box plot's whiskers. In a dataset, outliers are the cases that differ from the other values in terms of extreme difference. Box Plots were computed to identify the dataset's outliers. The figure B1 (Appendix B) suggest that all 7 variables have minimal or no outlier in the dataset.

3. Linearity

Discriminant analysis necessitates the linearity of the data set, which is one of the most important assumptions. Using a scatter plot to examine the

linearity of the dataset, it was determined that the data points were distributed in a linear fashion along the fit line, indicating the linearity of the dataset. Figure B2 and B3 (Appendix B) shows the scatter plot. It shows the scattered data along the fit line, which shows that the data set is linear.

4. Multicollinearity

Multi-collinearity is the presence of correlations among the dependent variables, which results in variable outcomes. Multicollinearity issues were investigated using the collinearity statistic, which takes into account two statistics: tolerance and variance inflation factor (VIF) of the independents in the proposed model. Tolerance value must be greater than 0.1. (Hair *et al*., 2010) and VIF value, should be less than or equal to three (Hair *et al*., 2010). The Tolerance and VIF values for the independent variables are displayed in Table A2 (Appendix A), demonstrating that they are well within the acceptable range.

Tests of Equality of Group Means

The table of tests of equality of group means contains Wilks' lambda, the F statistic, its degrees of freedom, and significance level. Wilks' Lambda variables (performance expectancy, effort expectancy, facilitating condition, price value, and habit) have values less than 0.5, indicating a significant group difference. Moreover, hedonic motivation and social influence lambda values were closed at 1, which shows no group difference. The F statistic and degree of freedom were used to obtain the significance level. Furthermore, in Table 5, significance levels are smaller than 1.10, which means that the group difference between teaching with technology and without it is significant.

Table 3: Tests of Equality of Group Means

Independent Variables	Wilks' Lambda	F	df1	df2	Sig.
Performance Expectancy	.613	541.208	1	858	.000
Effort Expectancy	.585	608.913	1	858	.000
Social Influence	.820	188.272	1	858	.000
Facilitating Condition	.155	4677.514	1	858	.000
Hedonic Motivation	.967	29.335	1	858	.000
Perceived Value	.444	1073.569	1	858	.000
Habit	.263	2400.670	1	858	.000

Table 4: Log Determinants

Teaching_Type	Rank	Log Determinant
Teaching with Technology	7	4.030
Teaching without Technology	7	1.431
Pooled within-groups	7	4.496

Box M's Results

Box's M-test result was used to test the null hypothesis of equal population covariance matrices. Table 4 above shows the significance value. The high value of Box M (1514.855) and the probability value of F (53.634), which is greater than 0.000, indicate that there was no significant difference between the covariance matrices. Thus, the null hypothesis of equal population covariance matrices was rejected because the value of the significance level was less than, say, 0.10. And the homogeneity assumption was not violated.

Table 5: BOX M

Box's M		1514.855
F	**Approx.**	53.636
	df1	28
	df2	2565217.568
	Sig.	.000

Summary of Canonical Discriminant Functions

Eigen Value and Wilks' Lambda

The Eigenvalue table 6 and Wilks' lambda table 7 show each function's characteristic root and how well each function separates cases into groups. Thus, both tables 5 and 6 show Eigen Value=12.481 (where the more significant the eigenvalue, the better the function differentiates) and Wilks' Lambda= 0.74 (smaller values of Wilks' lambda indicate the more extraordinary discriminatory ability of the function). Canonical Correlation Values = 0.962 (close to 1 indicates a strong correlation between the discriminant scores and the groups). Moreover, the total variance percentage was 92.54 per cent.

Table 6: Eigenvalues

Function	Eigenvalue	Per cent of Variance	Cumulative Per cent	Canonical Correlation
1	12.481[a]	100.0	100.0	.962
a. First 1 canonical discriminant functions were used in the analysis.				

Table 7: Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.074	2222.771	7	.000

Structure Matrix

The structure matrix tables show that facilitating conditions, habit, and price value are the most robust predictors to differentiate between teaching with and without technology. Furthermore, social influence and hedonic motivation are weaker predictors.

Table 8: Structure Matrix

Independent Variables	Function
	1
Facilitating Condition	.661
Habit	.473
Perceived Value	.317
Effort Expectancy	.238
Performance Expectancy	.225
Social Influence	.133
Hedonic Motivation	.052

The classical canonical discriminant functions coefficients given by SPSS was as follows

Y= -8.231 + performance expectancy (0.436) + effort expectancy (0.045) + social influence (-0.020) + facilitating condition (0.664) + hedonic motivation (-0.177) + price value (0.283) + habit (0.477)

Table 9: Canonical Discriminant Function Coefficients

Independent Variables	Function
	1
Performance_Expectancy	.436
Effort_Expectancy	.045
Social_Influence	-.020
Facilitating_Condition	.664
Hedonic_Motivation	-.177
Perceived _Value	.283
Habit	.477
(Constant)	-8.231

Confusion Matrix

The confusion matrix table 9 shows the number of correctly into Teaching with technology or without technology 98.8 per cent (the value is higher) which show that discriminant function is highly reliable.

Table 10: Classification Results

			Teaching_Type	Predicted Group Membership		Total
				Teaching with Technology	Teaching without Technology	
Cases Selected	**Original**	**Count**	**Teaching with Technology**	316	24	340
			Teaching without Technology	24	66	90
		Percentage	**Teaching with Technology**	73	6	100.0
			Teaching without Technology	6	15	100.0
	Cross Validate	**Count**	**Teaching with Technology**	316	24	340
			Teaching without Technology	24	66	90
		Percentage	**Teaching with Technology**	73	6	100.0
			Teaching without Technology	6	15	100.0
Cases not Selected	**Original**	**Count**	**Teaching with Technology**	117	12	129
			Teaching without Technology	23	78	101
		Percentage	**Teaching with Technology**	51	5	100.0
			Teaching without Technology	10	34	100.0
	a. 84.4 per cent of original grouped cases correctly classified.					

DISCUSSION

The study of using technology in teaching methodology indicates that if Faculty use technology like gamification, simulation, and AR/VR, it will make the course more engaging and emotionally connected. The following conclusions are drawn after analysis:

The facilitating conditions have a significant influence on the faculty's behavioural intention to adopt technologies in teaching, with a standardized canonical discriminate function coefficient of **0.661**, and were shown as the most substantial discriminating variable, as faculty believed that if they integrated new tools and technology into current pedagogy, it would help them achieve their job tasks more effectively and efficiently only when they got support from management. Integrating technology occurs once infrastructure, hardware, and software have been established. The quality of infrastructure may influence how people use technology. Technology-based practices include communication, collaboration, web-based

research, data retrieval, network-based transmission, and remote access. Technology usage must be fluid and habitual to integrate technology successfully and effectively. Change is possible because technology integration is a continuous process. The second variable, habit, has a significant influence on the faculty's behavioural intention to adopt technologies in teaching, with a standardized canonical discriminate function coefficient of **0.473**. To use new tools and technology in pedagogy, Faculty must first develop the habit of using them. Faculty can start integrating technology in informal learning, and later, when they build the confidence, they can use it in formal learning. The third essential variable, perceived value, has a value of 0.317; Faculty believe that the benefits of teaching with technology are more incredible than without technology, and Faculty are unlikely to adopt new tools and technology in pedagogy until they perceive benefits in terms of reducing their task, assisting in engaging students, and reaching their learning goals.

With the onset of the pandemic, there has been a major disruption to the teaching paradigm. As compared to the earlier approach, where only a few faculty members started experimenting with the adoption of new technologies, now it has been forced as part of imparting education. Thus, hedonic motivation has no significant influence on the faculty's behavioural intention to adopt technologies in teaching. Because of better infrastructure and relevant available funding, faculty at large institutions used to adopt a variety of new approaches. The pandemic created chaos, which forced everyone to move onto online mechanisms to keep themselves relevant. So, rather than a few faculty members becoming trendsetters for others to emulate, everyone was forced to play around. Therefore, social influence has no significant influence on the faculty's behavioural intention to adopt technologies in teaching. The online way of delivering lectures and the development of features and further refinement of collaboration tools like Microsoft Team, Skype, Zoom, etc. created a conducive environment and an almost level playing field with minor differentiation in approaches. Thus, performance expectancy has a less significant influence on the faculty's behavioural intention to adopt technologies in teaching. The abundance of materials on the web due to various initiatives of many universities and leading organizations like MIT Open Courseware, Coursera, Udemy, and SWYAM (an initiative of the Indian government) helped in providing uniform excess to various instructors. Therefore, effort expectancy has a less significant influence on the faculty's behavioural intention to adopt technologies in teaching.

LIMITATIONS

Future research studies may implement a longitudinal design that considers a more extended period, as this will aid in determining the causes and consequences of complex variables. Further, analyzing the impact of technology on teaching methodology over time improves the understanding of teaching phenomena for a short or long time. The current study captures the Delhi and NCR population teaching in a management institute; therefore, the result cannot be generalized to the other parts of the state and other streams. Thus, in the future, a researcher can conduct research in other parts of the Indian region. In this study, only the independent variables responsible for technology adoption were taken from the UTAUT 2 model. Future studies can also take some more independent variables from other models. Alternatively, researchers can explore some new variables for the study.

CONCLUSION

Technology can increase collaboration among faculty by sharing digital content and promoting ideas and research work. Integrating technology into the curriculum increases faculty productivity and efficiency. Faculty may get lesson plans and other essential materials for their students' learning on the internet, saving them time from having to write on the board or struggling to develop a plan. Faculty will have more time to incorporate other activities into their lesson plans and lead classroom discussions. Faculty may utilize technologies to boost their productivity, introduce various digital tools to improve students' learning, and improve academic performance and participation. In addition to this, it helps faculty improve their teaching methods and tailor learning according to students' needs. Institutions can benefit from technologies by lowering the cost of physical educational materials, enhancing efficiency, and maximizing teacher time for teaching. Some of the broad conclusions drawn from the results are that, out of seven variables, only three emerged as strong predictors of teaching with and without technology.

The most significant variables are performance expectancy, habit, and perceived value. Performance expectancy plays an essential role in teaching with technology. Faculty believe that integrating technology into teaching will improve their performance in teaching, reduce day-to-day tasks, disseminate information and content to students, and improve their efficiency, so in the future, there will be a significant chance that faculty will adopt technology in teaching and learning. If faculty cultivate the habit of teaching with technology, they can use it in their daily teaching. The third important variable is perceived value; Faculty perceive value when adopting technology when they see how it will improve efficiency.

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Appendix A

Table A1: Test of the Normality

Variables	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Performance Expectancy	.166	1144	.000	.941	1144	.912
Effort Expectancy	.142	1144	.000	.948	1144	.019
Social Influence	.115	1144	.000	.931	1144	.902
Facilitating Condition	.343	1144	.000	.782	1144	.067
Hedonic Motivation	.153	1144	.000	.946	1144	.920
Perceived Value	.131	1144	.000	.958	1144	.926
Habit	.148	1144	.000	.935	1144	.908

Table A2: Collinearity Statistics

Model	Collinearity Statistics	
	Tolerance	VIF
(Constant)		
Performance Expectancy	.647	1.545
Effort Expectancy	.388	2.581
Social Influence	.655	1.527
Facilitating Condition	.399	2.028
Hedonic Motivation	.678	1.474
Price Value	.449	2.227
Habit	.638	1.782

Appendix B

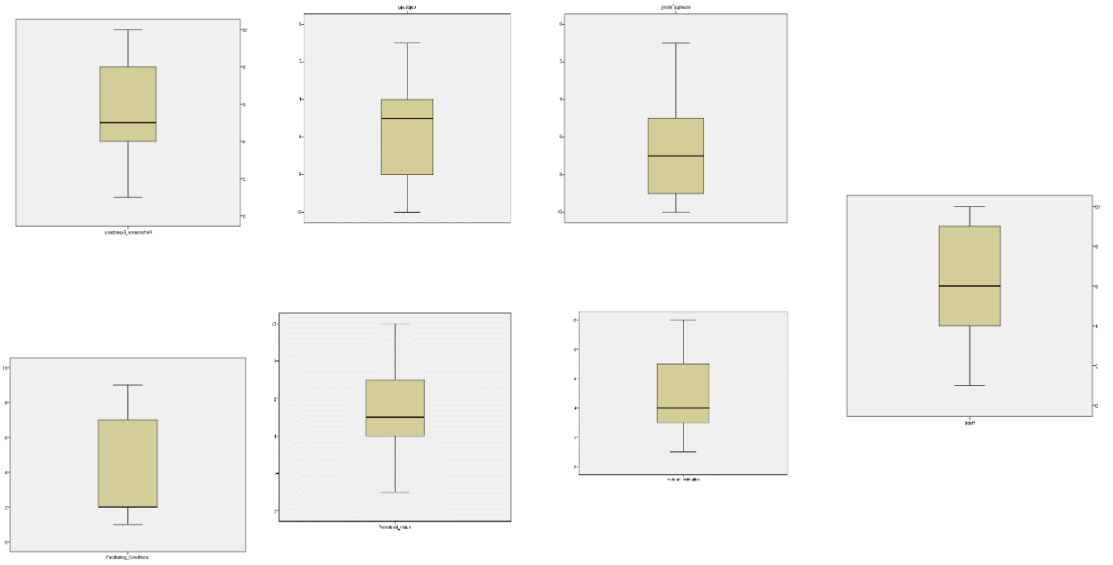

Figure B1: Box Plot Diagram

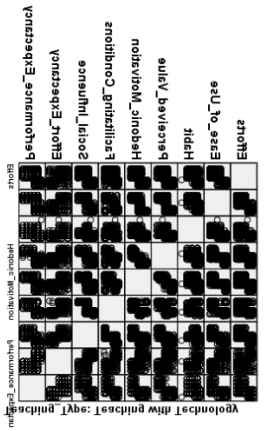

Figure B2: Matrix Scatter Plot Diagram

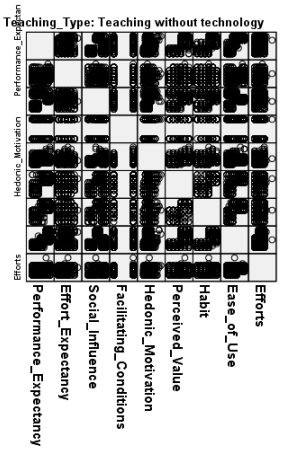

Figure B3: Matrix Scatter Plot Diagram