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Technology Adoption in Management Classroom Learning

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ABSTRACT

The paper aims to examine the factors affecting the intention to use technology by the MBA students. The Unified Theory of Acceptance and Use of Technology (UTAUT) is used as a research framework. Survey was conducted in seven metro cities in India viz; Mumbai, Pune, Kolkata, Delhi, Greater Noida, Bangalore and Chennai via questionnaire method. Out of 900 questionnaires distributed 517 students completed the survey questionnaire measuring their responses to five constructs in UTAUT. In addition to determining the factors which affect the usage of technology, the paper also enlists the type of technologies used and their frequency of usage in classroom learning by the students. The students of AICTE approved and University affiliated colleges providing full time Masters degree in Business Administration (MBA) participated in this survey.

Indexing terms/Keywords

Technology, Learning, Unified Theory of Acceptance and Use of Technology (UTAUT), Management.

Academic Discipline And Sub-Disciplines

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SUBJECT CLASSIFICATION

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1. INTRODUCTION

Information and communications technology (ICT) has become an important part of most organization and businesses these days (Zhang & Aikman, 2007). Also, Modern technology offers many means of improving teaching and learning in the classroom (Lefebvre, Deaudelin & Losiselle, 2006). Darell et al., predicted that in the right circumstances, new technologies adopted by members of a community will spread by diffusion.

1.1 Motivation for research

Understanding individual acceptance and use of information technology is one of the most mature streams of information systems research (Benbasat and Barki 2007; Venkatesh et al. 2007). Wong et al. 2006, pointed out that technology can play a part in supporting face-to-face teaching and learning in the classroom. Many researchers and theorists assert that the use of computers can help students to become knowledgeable, reduce the amount of direct instruction given to them, and give teachers an opportunity to help those students with particular needs(Iding, Crosby, & Speitel, 2002; Shamatha, Peressini, & Meymaris 2004; Romeo, 2006).

1.2 A note about terminology

Though International Society for Technology and Education (ISTE) and other professional organizations have tried to establish common definitions, there is still no consensus on technology terms. Known variously as educational technology, instructional technology and media, information technology, or information communication technology – terms often reduced to shorthand like EdMedia, IT, and ICT – educational technology is a verbal chameleon, reflecting its surroundings. The word “computer,” which before 1945 meant a person (usually a woman) responsible for computations and later referred to machines that occupied several rooms, now is more likely to signify laptops than desktop models in many schools. Lightweight handheld devices, also once thought to be the digital tool of choice for schools of the future (Bull and Garofalo, 2006), are now being replaced by cell phones as ubiquitous computing devices (Margaret S Crocco *et al* 2008). The term “technology” here encompasses computer hardware (e.g. scanners, cameras, projector) and software applications (e.g. word processing, excel, Internet, PowerPoint) and any technology specific to the students learning area as mentioned in Annexure.

2. REVIEW OF LITERATURE

In recent years, increases in class size, the diversity of student populations and changes in the expectations of students have all acted as stimuli for an examination of approaches to teaching and learning (Saunders, 2000). Coupled to developments in information and communication technology (ICT), these stimuli have generally led to different and more flexible approaches to learning, often involving the increased use of ICT in the classroom (Collis and Moonen 2001; Hudson et al., 1997; Saunders et al., 1999). For example the use of presentation graphics (e.g., PowerPoint) in the classroom appears to be embraced enthusiastically by faculty and administrators at institutions nationwide. Many classrooms are being equipped with computers and costly projection devices to support presentation graphics as well as other visual presentation media. Faculty members are contributing countless hours in the preparation of slide show presentations to accompany lecture material, necessitating large electronic files that create increasing electronic storage capacity needs. Textbook companies are contracting with individuals to construct textbook-specific slide shows in an effort to increase the marketability of their textbooks. Despite the extensive investments of human and financial resources, few studies exist that clearly delineate the benefits of the use of presentation graphics (Murray, 2001). Specifically, there is limited empirical evidence to date supporting a positive impact on student learning and students_ and professors_ perceptions of the classroom experience (Jennifer M. Apperson et al, 2006).

A variety of theoretical perspectives have been advanced to provide an understanding of the determinants of usage. One important line of research has employed intention-based models which use behavioral intention to predict usage and, in turn, focus on the identification of the determinations of intention, such as attitudes, social influences, and facilitating conditions (Davis et al., 1989, 1992; Hartwick and Barki 1994; Mathieson 1991). This work is grounded in models from social psychology, such as the Theory of Reasoned Action (TRA) (Ajzen and Fishbein 1980), and the Theory of Planned (TPB) (Ajzen 1985, 1991). From this stream of research, the Technology Acceptance Model (TAM) has emerged as a powerful and parsimonious way to represent the antecedents of system usage through beliefs about two factors: the perceived ease of use and the perceived usefulness of information system (Davis 1989, 1993; Davis et al 1989 1992). TAM is an adaptation of the TRA. In TAM, intention is determined by attitude towards usage as well as by the direct and indirect effects of perceived ease of use and perceived usefulness. The practical utility of the model stems from the fact that ease of use and usefulness are factors over which as system designer has some degree of control. To the extent that they are key determinants of usage, they provide direction to designers as to where efforts should be focused (Taylor and Todd, 1995).

2.1 Theoretical Framework

The eight original models and theories of individual acceptance that are synthesized by Venkatesh et al. (2003) in his UTAUT model include, the Theory of Reasoned Action (TRA), Technology Acceptance Model (TAM), Motivational Model (MM), Theory of Planned Behavior (TPB), Model Combining the Technology Acceptance Model and Theory of Planned Behavior (C-TAM-TPB), Model of PC Utilization (MPCU), Innovation Diffusion Theory (IDT), and Social

Cognitive Theory (SCT). Constructs of each models and theories, including the UTAUT model, are represented in Table 1.

Table 1: Models and Theories of Individual Acceptance Venkatesh et al, (2003)

Models and Theories	Constructs
Theory of Reasoned Action (TRA) by Fishbein and Ajzen (1975) derives from psychology to measure behavioral intention and performance.	Attitude Toward Behavior Subjective Norm
Technology Acceptance Model (TAM) by Davis (1989) develops new scale with two specific variables to determine user acceptance of technology. Technology Acceptance Model 2 (TAM2) by Venkatesh and Davis (2000) is adapted from TAM and includes more variables.	Perceived Usefulness Perceived Ease of Use Subjective Norm* Experience* Voluntariness* Image* Job Relevance* Output Quality* Result Demonstrability* * indicates TAM2 only
Motivational Model (MM) also stems from psychology to explain behavior. Davis et al. (1992) applies this model to the technology adoption and use.	Extrinsic Motivation Intrinsic Motivation
Theory of Planned Behavior (TPB) by Ajzen (1991) extends TRA by including one more variable to determine intention and behavior.	Attitude toward Behavior Subjective norm Perceived Behavioral Control
Combined TAM and TPB (C-TAM-TPB) by Taylor and Todd (1995).	Perceived Usefulness Perceived Ease of Use Attitude Toward Behavior Subjective norm Perceived Behavioral Control
Model of PC Utilization (MPCU) by Thompson et al. (1991) is adjusted from the theory of attitudes and behavior by Triandis (1980) to predict PC usage behavior rather than intention.	Job fit Complexity Long term consequences Affect Towards use Social Factors Facilitating Conditions
Innovation Diffusion Theory (IDT) by Rogers (1962) is adapted to information systems innovations by Moore and Benbasat (1991). Five attributes from Rogers' model and two additional constructs are identified.	Relative Advantage* Compatibility* Ease of Use* Visibility* Result Demonstrability* Image Voluntariness of Use * indicates Roger's constructs.
Social Cognitive Theory (SCT) by Bandura (1986) is applied to information systems by Compeau and Higgins (1995) to determine the usage.	Self-Efficacy Outcome Expectations -Performance Outcome Expectations - Personal Affect Anxiety
Unified Theory of Acceptance and Use of Technology Model (UTAUT) by Venkatesh et al. (2003) integrates above theories and models to measure user intention and usage on technology	Performance Expectancy Effort Expectancy Attitude toward Using Technology Social Influence Facilitating Conditions Self-Efficacy Anxiety

Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al. 2003) is a validated model which is used in this research.

Venkatesh, Morris, Davis, G.B. and Davis F.D.(2003) introduced the Unified Theory of Acceptance and Use of Technology (UTAUT) with four core determinants of intention and usage, and up to four moderators of key

relationships viz age, gender, experience and voluntariness. The UTAUT was formulated by theorizing four constructs to play an important role as direct determinants of user acceptance and usage behavior:

1. Performance expectancy: It is defined as the degree to which an individual believes that using the system will help him or her to attain gains in job performance.
2. Effort expectancy: It is defined as the degree of ease associated with the use of the system.
3. Social influence: It is defined as the degree to which an individual perceives that important others believe he or she should use the new system.
4. Facilitating conditions: Facilitating conditions are defined as the degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system.
5. Behavioural intention: It refers to the individual's decision regarding future system use.
6. Use behaviour: It refers to the actual usage of the system.

The following paragraphs present a brief description of each factors:

Performance Expectancy: This construct tries to capture the perceived usefulness of technology considered by the students. The information sought is on- improved job performance, efficiency, higher achievement and usefulness of technology.

Effort Expectancy: This construct includes three factors:
Perceived ease of use: The degree to which a person believes that using a particular system would be free of effort.
Ease of learning to use the system: The degree to which technology is perceived as being easy to use.
Self Efficacy: Self efficacy is the measure of one's own competence to complete tasks and reach goals.

Social Influence**;** It is defined as the extent to which students perceive a social pressure to use technology. It involves two factors.

Subjective Norm: The person's perception that most people who are important to him think he should or should not perform the behavior in question.

Image: The degree to which use of an innovation is perceived to enhance one's image or status in one's social system (Moore and Benbasat 1991, p.195)

Facilitating Conditions: It is defined as the extent to which the students perceive institutional support to use technology.
ICT Infrastructure: Availability and Reliability of facilities
Institutional Policy: Opportunity and Incentives for using technology
Training and Technical Support provided: Training to use the system effectively.

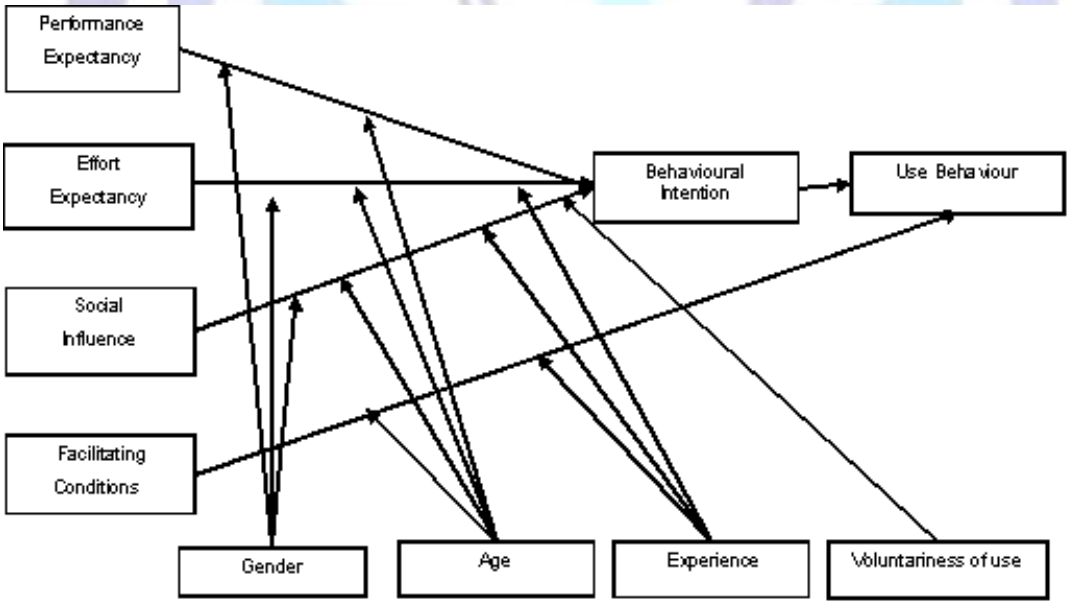

Figure 1: Unified Theory of Acceptance and Use of Technology

3. RESEARCH METHODOLOGY

Research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. In this the researcher pursues various steps that are generally adopted by a researcher in studying his research problem along with the logic behind them. It is necessary to know not only the research methods and techniques but also the methodology.

3.1 Population/Universe

The Population for this research, the entire group of people that the researcher wishes to investigate (Sekaran 2003), are the students' within the Business Schools in India.

The research did not cover the following categories:

1) Business Schools awarding Post Graduate Diploma in Management (PGDM).
2) Government Colleges awarding Masters Degree in Business Administration (MBA).
3) Autonomous Universities in India.
4) Business Institutes awarding Distance education in Management in India.
5) Part-time Masters in Business Administration degree provided by the Business schools in India.
6) Business Institutes which are not recognized by All India Council for Technical Education (AICTE) and affiliated to any private University.

3.2 Sampling frame and Sample Size

The subject of the study is Full Time students of the AICTE approved and University affiliated MBA Institutes in India. Around 900 questionnaires were distributed and 517 were returned completed thereby giving a response rate of 57%.

3.3 Data Collection

The survey research was conducted in seven cities across four regions in India: North, South, East and West.

- North: Delhi- Guru Gobind Singh Indraprastha University (GGSIP), Greater Noida- Mahamaya University.
- South: Bangalore- Bangalore University , Visvesvaraya Technological university and Chennai- University of Madras, Anna University.
- East: Kolkata- West Bengal University of Technology (WBUT).
- West: Mumbai-Mumbai University and Pune- Pune University

Participation in this study was voluntary and 517 full time MBA students across various MBA Institute in India completed the survey. Participants were briefed on the purpose of this study through a covering letter and informed that they could decline to participate in the study before or after they had completed the questionnaire. At places were the questionnaire was self administered the participants took approximately 5-7 minutes to complete the questionnaire.

3.4 Measures

A survey questionnaire comprising previously validated items was used. Participants were asked to provide their demographic information and respond to 27 statements on the five constructs in this study. They are: Performance Expectancy (PE) (six items), Effort Expectancy (EE) (six items), Social Influence (SI) (six items), Facilitating conditions-FC (Facilitating conditions are divided into two parts. Facilitating conditions-Direct (FCD) and Facilitating conditions –support (FCS) (six items), Behavioral Intention (BI) (three constructs). Also, data about the various software and hardware used in Regular classroom teaching was college to know about the actual use of technology. Each statement was measured on a seven-point Likert scale with 1 = strongly disagree to 7 = strongly agree. Table I shows the items and the sources where the items were adapted. While taking the survey the students were informed that the definition of technology encompasses computer hardware (e.g. scanners, cameras, projector) and software applications (e.g. word processing, excel, Internet, PowerPoint) and any technology specific to their teaching area.

4. ANALYSIS AND CONCLUSIONS

Table 2. Reliability Analysis (n=517)

UTAUT construct	Cronbach's Alpha	Number of Items	Reliability Results	Inter-Item Correlation	Item-total Correlation
Performance Expectancy	.886	6	good	0.475-0.635	0.647- 0.750
Effort Expectancy	.838	6	good	0.308-0.594	0.489-0.656
Social Influence	.757	6	acceptable	0.122- 0.680	0.416-0.571
Facilitating Conditions	.827	6	good	0.208- 0.649	0.441- 0.649
Behavioral Intention	.865	3	good	0.610- 0.743	0.697 – 0.798

Cronbach's coefficient Alpha (Cronbach 1951) is the most popular test of inter-item consistency reliability. This is a test of the consistency of respondents' answers to all the items in a measure. When the items are independent

measures of the same concept, they will be correlated with one another (Sekaran 2000). Table 2 above presents the Cronbach's coefficient alpha for n=517. According to Sekaran (2000), reliabilities less than 0.6 are considered to be poor, those in the 0.7 range, acceptable, and those over 0.8 good. The closer the reliability coefficient gets to 1.0, the better.

4.1 Correlation Analysis

Table 3 below gives the Pearson Correlation Analysis.

The table below shows the correlation matrix between the various constructs. The Performance Expectancy has a high positive association with Effort expectancy (r = .551). Also the Behavioral Intention and Effort Expectancy had moderate association which each other (r = .450). However, Performance Expectancy (r = .172) and Effort Expectancy (r =.212) were weakly associated with Facilitating Conditions.

Table 3. Correlations

		Performance Expectancy	Effort Expectancy	Social Influence	Facilitating Conditions	Behavioral Intention
Performance Expectancy	Pearson Correlation	1	.551**	.341**	.172**	.355**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	517	517	517	517	517
Effort Expectancy	Pearson Correlation	.551**	1	.317**	.212**	.450**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	517	517	517	517	517
Social Influence	Pearson Correlation	.341**	.317**	1	.414**	.377**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	517	517	517	517	517
Facilitating Conditions	Pearson Correlation	.172**	.212**	.414**	1	.265**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	517	517	517	517	517
Behavioral Intention	Pearson Correlation	.355**	.450**	.377**	.265**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	517	517	517	517	517

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

4.2 Descriptive Analysis

A descriptive statistical analysis is described in this section in order to provide a richer understanding of the students' perceptions. Table 4 below summarizes the frequencies and corresponding percentages for the students' perceptions with respect to Performance Expectancy. As can be seen the students tend to believe that Technology is a useful and productive tool.

Table 4. Descriptive Statistics for Performance Expectancy

Questionnaire Item	Strongly Disagree 1	Quite Disagree 2	Slightly Disagree 3	Neutral 4	Slightly Agree 5	Quite Agree 6	Strongly Agree 7	Mean	Std Dev
PE1: Using technology in studies enables me to accomplish tasks (e.g. learn	1.5% (8)	2.3% (12)	2.9% (15)	6.4% (33)	9.3% (48)	32.7% (169)	**44.9% (232)**		

the topic, complete assignment) more quickly.								5.97	1.34
PE2:Using technology improves my performance in my studies	1.4% (7)	1.4% (7)	2.5% (13)	8.5% (44)	16.1% (83)	33.8% (175)	**36.4% (188)**	5.84	1.27
PE3:Using technology increases my productivity in learning	1.5% (8)	1.2% (6)	2.3% (12)	8.9% (46)	21.1% (109)	**35.2% (182)**	29.8% (154)	5.72	1.25
PE4:Using technology enhances my efficiency as a student	1.0% (5)	1.9% (10)	3.9% (20)	9.1% (47)	13.9% (72)	**36.9% (191)**	33.3% (172)	5.77	1.30
PE5:Using technology makes my studies easier	1.0% (5)	1.2% (6)	2.1% (11)	8.5% (44)	17.0% (88)	**35.8% (185)**	34.4% (178)	5.85	1.21
PE6: I find the technology, I am using useful in my studies.	0.6% (3)	2.3% (12)	2.1% (11)	7.7% (40)	14.9% (77)	35.0% (181)	**37.3% (193)**	5.88	1.23

Table 5 provides the descriptive analysis for students' perception regarding Effort Expectancy. From the table the students quite agree that they find using technology easy to do things they want, it is easy for them to become competent to use technology. However students agree that using technology requires a lot of mental effort.

Table 5. Descriptive Statistics for Effort Expectancy

Questionnaire Item	Strongly Disagree 1	Quite Disagree 2	Slightly Disagree 3	Neutral 4	Slightly Agree 5	Quite Agree 6	Strongly Agree 7	Mean	Std Dev
EE1: I find it easy to get technology to do what I want to do.	1.5% (8)	2.1% (11)	3.5% (18)	10.1% (52)	23.0% (119)	**37.7% (195)**	22.1% (114)	5.52	1.30
EE2:It is easy for me to become competent at using technology	1.0% (5)	1.5% (8)	3.3% (17)	10.6% (55)	22.4% (116)	**41.4% (214)**	19.7% (102)	5.55	1.19
EE3:I find technology easy to use	0.8% (4)	2.5% (13)	3.3% (17)	9.5% (49)	16.8% (87)	**39.3% (203)**	27.9% (144)	5.68	1.27
EE4:My interaction with technology is clear and understandable	0.6% (3)	1.4% (7)	4.3% (22)	9.5% (49)	21.3% (110)	**40.0% (207)**	23.0% (119)	5.62	1.19
EE5: I posses the skills necessary	2.9% (15)	7.0% (36)	10.1% (52)	13.9% (72)	20.9% (108)	**25.0% (129)**	20.3% (105)	4.99	1.64

to use technology									
EE6: Is Learning to use Technology easy for you.	1.2% (6)	2.1% (11)	3.9% (20)	9.3% (48)	18.4% (95)	**39.3% (203)**	25.9% (134)	5.63	1.29

Table 6 provides statistical analysis regarding the descriptive statistics about the Social Influence to use Technology on the Students. Students are majorly influenced by their friends to use technology. Students agree that the ones who use technology are considered to be smart and enjoy more prestige than others.

Table 6. Descriptive Statistics for Social Influence

Questionnaire Item	Strongly Disagree 1	Quite Disagree 2	Slightly Disagree 3	Neutral 4	Slightly Agree 5	Quite Agree 6	Strongly Agree 7	Mean	Std Dev
SN1: The people who influence your behavior want you to use technology are your Teachers	2.3% (12)	3.9% (20)	4.4% (23)	14.5% (75)	19.1% (99)	**31.9% (165)**	23.8% (123)	5.35	1.48
SN2: The people who influence your behavior want you to use technology. These people are your :Head of the department	3.3% (17)	4.6% (24)	3.9% (20)	19.5% (101)	23.4% (121)	**26.1% (135)**	19.1% (99)	5.10	1.52
SN3: The people who influence your behavior want you to use technology. These people are your Friends	2.3% (12)	0.4% (2)	2.5% (13)	8.3% (43)	13.3% (69)	30.9% (160)	**42.2% (218)**	5.91	1.32
SN4: Most people who are important to you want you to use technology as much as possible.	1.7% (9)	1.4% (7)	1.9% (10)	13.5% (70)	20.7% (107)	**35.6% (184)**	25.1% (130)	5.57	1.28
I1: In your institution, students who use technology have more prestige than who do not.	5.4% (28)	6.0% (31)	8.1% (42)	23.8% (123)	16.8% (87)	**26.3% (136)**	13.5% (70)	4.74	1.64
I2: Students in your institution who use technology are considered to be smart.	4.4% (23)	5.8% (30)	6.2% (32)	18.6% (96)	19.0% (98)	**27.9% (144)**	18.2% (94)	4.98	1.63

Facilitating conditions have been divided into two parts viz. Direct and Support. The descriptive analysis for the same is in the Table 7a and Table 7b respectively. Most of the students agree that their institute provides them all the

facilities to use the technology. However, they are neutral when it comes to the necessary infrastructure available in the institute. From table 7b, the students confirm that they are not given any incentives to use the technology. They are neutral in opinion when asked whether training is provided to them for using technology. However, they agree that technical help is available when required.

Table 7a. Descriptive Statistics for Facilitating Conditions:
Facilitating Conditions Direct: (FCD)

Questionnaire Item	Strongly Disagree 1	Quite Disagree 2	Slightly Disagree 3	Neutral 4	Slightly Agree 5	Quite Agree 6	Strongly Agree 7	Mean	Std Dev
FCD1:Your institute has provided you all the facilities to use technology	4.8% (25)	6.2% (32)	10.3% (53)	14.5% (75)	22.1% (114)	**25.5% (132)**	16.6% (86)	4.86	1.67
FCD2:The ICT infrastructure at your institute is available when you need	5.2% (27)	6.8% (35)	8.3% (43)	**28.0% (145)**	18.6% (96)	23.8% (123)	9.3% (48)	4.56	1.57
FCD3:Your institute provides you an opportunity for using technology	4.8% (25)	3.5% (18)	8.1% (42)	16.1% (83)	19.5% (101)	**26.1% (135)**	21.9% (113)	5.08	1.64

Table 7b. Descriptive Statistics for Facilitating Conditions Support:

Questionnaire Item	Strongly Disagree 1	Quite Disagree 2	Slightly Disagree 3	Neutral 4	Slightly Agree 5	Quite Agree 6	Strongly Agree 7	Mean	Std Dev
FCS1: Your institute provides incentives to students who use technology.	**31.7% (164)**	9.5% (49)	11.2% (58)	19.7% (102)	11.2% (58)	10.4% (54)	6.2% (32)	3.25	1.97
FCS2: My institute has provided me training to use technology**.**	14.7% (76)	10.1% (52)	12.4% (64)	**20.1% (104)**	16.4% (85)	18.6% (96)	7.7% (40)	4.00	1.85
FCS3: There is technical help available if required while using technology.	7.4% (38)	6.8% (35)	7.4% (38)	17.0% (88)	21.1% (109)	**25.3% (131)**	15.1% (78)	4.74	1.74

The Behavioral Intention from Table 8 shows that students tend to show a positive approach for using technology in future.

Table 8. Descriptive Statistics for Behavioral Intention

Questionnaire Item	Strongly Disagree 1	Quite Disagree 2	Slightly Disagree 3	Neutral 4	Slightly Agree 5	Quite Agree 6	Strongly Agree 7	Mean	Std Dev

BI1: I intend to use technology in the next semester.	1.7% (9)	1.7% (9)	2.9% (15)	12.8% (66)	13.7% (71)	27.7% (143)	**39.5% (204)**	5.76	1.40
BI2: I predict I would use technology in the next semester**.**	1.4% (7)	2.5% (13)	3.7% (19)	13.2% (68)	14.7% (76)	27.7% (143)	**36.9% (191)**	5.68	1.42
BI3: I plan to use technology in the next semester.	1.7% (9)	1.2% (6)	2.7% (14)	14.1% (73)	11.6% (60)	28.6% (148)	**40.0% (207)**	5.79	1.38

The Table 9 below gives us frequency of usage or the actual usage of the various technologies students use in classroom. Students rarely use scanner, discussion boards, PC based statistics software. The frequency of usage of speakers, cameras, Presentation graphics, and spreadsheets are several times a day.

Table 9. Descriptive Statistics on Actual Technologies Used in Classroom Learning

Technologies (Hardware/ Software)	Use Several times a day	Use about once a day	Use five to six times a week	Use a few times a week	Use about once each week	Use a few times a month	Use about once each month	Don't use at all	Mean
1.Personal computer	**45.7 % (236)**	16.7% (86)	3.9% (20)	7.4% (38)	4.5% (23)	5.2% (27)	3.3% (17)	13.4% (69)	3.04
2.Laptop	**64.4 % (333)**	11.8% (61)	3.7% (19)	3.1% (16)	2.3% (12)	2.5% (13)	1.2% (6)	11.0% (57)	2.34
3.Scanner	5.4% (28)	5.0% (26)	5.0% (26)	9.1% (47)	6.2% (32)	12.4% (64)	16.1% (83)	**40.8% (211)**	6.11
4.Video Cassette, CD or DVD Recorder	16.4 % (85)	10.4% (54)	11.0% (57)	11.4% (59)	8.1% (42)	10.1% (52)	10.3% (53)	**22.2% (115)**	4.67
5.Interactive DVDs or CDs	14.4 % (74)	10.3% (53)	7.6% (39)	12.1% (62)	8.9% (46)	12.5% (64)	12.6% (65)	**21.6% (111)**	4.87
6.Laser Disc Player or Standalone DVD or CD players	10.7 % (55)	6.2% (32)	8.0% (41)	9.1% (47)	7.8% (40)	10.7% (55)	10.5% (54)	**37.1% (191)**	5.57
7.Speakers	**48.1 % (248)**	14.5% (75)	7.8% (40)	7.6% (39)	3.5% (18)	5.4% (28)	4.5% (23)	8.7% (45)	2.82
8.Camera	**46.8 % (242)**	12.4% (64)	12.6% (65)	7.5% (39)	1.9% (10)	8.1% (42)	5.6% (29)	5.0% (26)	2.77
9.Smart board	8.3% (43)	7.2% (37)	6.4% (33)	8.3% (43)	6.2% (32)	5.2% (27)	4.7% (24)	**53.7% (277)**	6
10.Overhead	**28.3**	10.5%	6.2%	9.5%	7.0%	5.8% (30)	5.2%	27.4%	4.32

Projector	**% (146)**	(54)	(32)	(49)	(36)		(27)	(141)	
11.LCD Projector	26.9 % (139)	9.5% (49)	8.5% (44)	6.8% (35)	6.2% (32)	5.2% (27)	5.6% (29)	**31.2% (161)**	4.5
12.Personal Digital Assistant (e.g. Palm, Blackberry, IPAQ)	23.4 % (121)	7.0% (36)	4.4% (23)	4.4% (23)	3.1% (16)	3.3% (17)	4.3% (22)	**50.1% (259)**	5.34
13. Presentation Graphics (MS-Power Point, etc)	**33.5 % (173)**	19.7% (102)	13.3% (69)	14.5% (75)	7.0% (36)	5.0% (26)	3.5% (18)	3.5% (18)	2.88
14. Word Processing (MS-Office ,etc)	**38.7 % (200)**	19.3% (100)	13.9% (72)	11.2% (58)	5.4% (28)	4.1% (21)	4.1% (21)	3.3% (17)	2.7
15. Outlook Express/ E-mail	**34.1 % (176)**	12.8% (66)	8.9% (46)	9.9% (51)	4.3% (22)	4.5% (23)	5.0% (26)	20.5% (106)	3.74
16. Spreadsheet (MS- Excel, etc)	**28.7 % (148)**	15.1% (78)	14.2% (73)	13.2% (68)	7.0% (36)	6.0% (31)	6.6% (34)	9.1% (47)	3.45
17. PC based Statistics Software- SPSS, Minitab	8.9% (46)	6.0% (31)	6.8% (35)	8.6% (44)	7.4% (38)	5.6% (29)	9.7% (50)	**46.9% (241)**	5.9
18.Wireless Internet connection	**57.4 % (297)**	9.5% (49)	6.2% (32)	6.0% (31)	2.5% (13)	4.1% (21)	4.1% (21)	10.3% (53)	2.66
19. Local area network (LAN)	**45.1 % (232)**	14.0% (72)	7.4% (38)	5.1% (26)	3.9% (20)	5.1% (26)	4.1% (21)	15.4% (79)	3.17
20. Web based Technologies	**35.9 % (185)**	14.8% (76)	10.7% (55)	5.0% (26)	4.9% (25)	3.5% (18)	7.0% (36)	18.3% (94)	3.58
21. Discussion Boards	12.0 % (62)	3.7% (19)	8.0% (41)	7.2% (37)	5.4% (28)	5.6% (29)	8.7% (45)	**49.3% (254)**	5.89

4.3 Multiple Regression

Performance Expectancy (PE), Effort Expectancy (EE), Subjective Norm (SN), Image (I), Facilitating Conditions Direct (FCD) and Facilitating Conditions Support (FCS) were used in standard regression analysis to predict Behavioral Intention (BI) for Students. The correlations of the variables are shown in the Table 11 below. As can be seen, all correlations are statistically significant.

The prediction model was statistically significant $F(6, 510) = 32.766$, $p < .05$, and accounted for approximately 27% of the variance of behavioral intention ($R^2 = .278$, adjusted $R^2 = .270$). Behavioral Intention was primarily predicted to a larger extent by Ease of Use and Subjective Norm while Perceived Usefulness, Image, Facilitating Conditions Support and Facilitating Conditions Direct had a lesser effect on it. The raw and standardized regression coefficients of the predictors together with their correlations with Behavioral Intention, are shown in the Table 14 below

Table 10. Descriptive Statistics[a]

	Mean	Std. Deviation	N
Behavioral intention	5.74	1.243	517
Performance Expectancy	5.84	1.013	517
Effort Expectancy	5.57	.930	517
Subjective Norm	5.49	1.065	517
Image	4.86	1.492	517
Facilitating Condition Direct	4.83	1.407	517
Facilitating Condition Support	4.00	1.514	517

a. Selecting only cases for which CAT = S

Table 11. Pearson Correlation

		Behavioral Intention	Performance Expectancy	Effort Expectancy	Subjective Norm	Image	Facilitating Conditions Direct	Facilitating Conditions Support
Pearson Correlation	Behavioral Intention	1.000	.355	.450	.351	.257	.274	.193
	Performance Expectancy	.355	1.000	.551	.352	.182	.213	.093
	Effort Expectancy	.450	.551	1.000	.320	.180	.255	.121
	Subjective Norm	.351	.352	.320	1.000	.352	.354	.242
	Image	.257	.182	.180	.352	1.000	.263	.349
	Facilitating Conditions Direct	.274	.213	.255	.354	.263	1.000	.539
	Facilitating Conditions Support	.193	.093	.121	.242	.349	.539	1.000

Table 12. Model Summary[b,c]

Model	R		R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson Statistic	
	CAT = S (Selected)	CAT ~= S (Unselected)				R Square Change	F Change	df1	df2	Sig. F Change	CAT = S (Selected)	CAT ~= S (Unselected)
1	.527[a]	.524	.278	.270	1.062	.278	32.766	6	510	.000	1.987	1.646

a. Predictors: (Constant), Facilitating Conditions Support, Performance Expectancy, Effort Expectancy, Image, Subjective Norm, Facilitating Condition Direct.

b. Unless noted otherwise, statistics are based only on cases for which CAT = S.

c. Dependent Variable: Behavioral Intention

Table 13. ANOVA[a,b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	221.671	6	36.945	32.766	.000[c]
	Residual	575.053	510	1.128		
	Total	796.725	516			

a. Dependent Variable: BI

b. Selecting only cases for which CAT = S

c. Predictors: (Constant), FCS, PE, I, SN, EE, FCD

Table 14. Coefficients[a,b]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	.971	.349		2.777	.006			
	PE	.118	.057	.096	2.071	.039	.355	.091	.078
	EE	.411	.062	.308	6.686	.000	.450	.284	.252
	SN	.173	.051	.148	3.367	.001	.351	.147	.127
	I	.083	.035	.099	2.359	.019	.257	.104	.089
	FCD	.069	.042	.078	1.648	.100	.274	.073	.062
	FCS	.028	.038	.035	.749	.454	.193	.033	.028

a. Dependent Variable: BISUM

b. Selecting only cases for which CAT = S

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Annexure

List of Technologies:

1.Personal computer
2.Laptop
3.Scanner
4.Video Cassette, CD or DVD Recorder
5.Interactive DVDs or CDs
6.Laser Disc Player or Standalone DVD or CD players
7.Speakers
8.Camera
9.Smart board
10.Overhead Projector
11.LCD Projector
12.Personal Digital Assistant (e.g Palm, Blackberry, IPAQ)
13. Presentation Graphics (MS- Power Point, etc)
14. Word Processing (MS-Office ,etc)
15. Outlook Express/ E-mail
16. Spreadsheet (MS- Excel, etc)
17. PC based Statistics Software- SPSS, Minitab
18.Wireless Internet connection
19. Local area network (LAN)
20. Web based Technologies
21. Discussion Boards