To Study the Effectiveness of ICT used in Management Education in Indore

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Abstract

This research paper attempts to find out the effectiveness of the ICT used in management education. The survey was conducted amongst the professors of management in Indore city. They were interviewed on certain points and closed ended questionnaire were also served to 81 respondents. Outcome was mixed result.

Keywords: *ICT, management education.*

Introduction

One thing is said to be certain that is 'change'. In current era we are viewing tremendous change in the Information and Communication Technology (ICT) sector in all the growth oriented industries .Education sector is equally influenced and is affected by the use new technology.ICT also known as the extension of IT (Information Technology) refers to all the technology which handles broadcast media, audiovisual processing, telecommunication etc. It is used to store, create, manage and circulate information.(wikibooks,2016)

According to UNESCO (2002) information and communication technology (ICT) may be regarded as the combination of' Informatics technology' with other related technology, specifically communication technology. The various kinds of ICT products available and having relevance to education, such as teleconferencing, email, audio conferencing, television lessons, radio broadcasts, interactive radio counselling, interactive voice response system, audio cassettes and CD ROMs etc. have been used in education for different purposes (Sharma, 2003; Sanyal, 2001; Bhattacharya and Sharma,2007)

In traditional methods professors has to organize, accumulate and provide information and knowledge to his students and needs to keep check whether students are attentive, disciplined and are getting the concepts. Rapid change in methods and in growth of ICT, education system is witnessing radical changes. (Bell, 1973; Masuda, 1982) The ICT method is found to be attractive and is effective in gaining attention of new generation. Students actively participate in the learning process and in problem solving, where educator stands back as an observer, advisor, facilitator of learning and as skill developer. (Negi.et.al, 2013) A report by the National Institute of Multimedia Education has shown integration of ICT in curriculum has improved the learning. (elmoglobal, 2016)

Management education plays a vital role in creating innovators, entrepreneurs, businessmen, planners of various industries worldwide. Competent managers require global thinking and higher learning which can be achieved through specialized knowledge and deep expertise. (ft, 2016) In order to keep pace with this rapid changing world and its technologies, management education needs to be collaborate use of ICT in their curriculum.

A study on usage of ICT in higher education infer that transformation is evident in the education sector by the technological advancement.(Krishnaveni and Meenakumari, 2007) By providing support to students through live lectures, digitally recorded study material, virtual libraries, lecture notes, online tutorials, linked websites, tools on internet help both teachers and students in their writing assignments and to avoid plagiarism. But use of ICT in education has to consider its installation cost especially in developing countries. (Toro and Joshi, 2012)

Literature Review

Effect on students' achievements

Researchers study gives different conclusions. Some show that ICT plays no important role in management education (Angrist and Lavy, 2002; Banerjee *et al.*, 2004; Goolsbee and Guryan, 2002; Kirkpa- trick and Cuban, 1998).While other studies show the importance of ICT in management education as far as students achievement is concern. (Kulik, 1999; Sosin *et al.*, 2004; Fushs and Wossman, 2004; Talley, 2005; Coates *et al.*, 2004) Coates *et al.* (2004) report that the average Test of Understanding College Level Economics (TUCE) scores are almost 15% more for the face-to-face method than for the online method.

Navarro and Shoemaker (1999) report as per means of test scores that there is not much difference in academic performance of on-campus and online class on principles of macroeconomics.

Brown and Liedholm (2002) reported that exam results for principles of economics course were nearly 6% more for the on-campus method than for the online method. They point that better performance in the on-campus classes is due to in-person teacher-student interactions, and comparative poorer performance in the online class due to the lack of self-discipline in students required for independent learning.

Leuven *et al.* (2004) reported that there is negative impact on some students' achievement as they may use ICT and spend more time on gaming and communicating then studying.

Harmon and Lambrinos (2007) report that in students of management education chances increases of correct answer in exams if they have studied that on-line.

In management education, students are being trained for managing and hence it is essential for them to learn industrial processes. ICTs help in such simulations by providing latest practices. Today in industrial processes sophisticated computer systems are used. It becomes important for students to learn about them during their education.(Anwar and Mathew, 2014)

Results of a study show that teaching and learning with technology is more effective and interesting as compared to traditional classroom. In this study teachers believe use of ICT helps in class management as lessons designed are more interesting and keep students engage and foster students' learning.(Ghavifekr and Rosdy,2015)

Effect on educators' role

Integrating ICT with education won't replace the educators in fact educators role becomes critical. Educators become more the coach, mentor and facilitator to guide the students about asking questions, formulating hypothesis, to locate and assess related information. ICT make educators co-learners by enhancing their learning. (Tinio, 2016)

ICT supports teaching by incorporating technology like virtual labs, web-based activities, multimedia presentations, sophisticated software etc. ICT enables educators to provide improved educational contents and can clear concepts of the students. It improves teaching-learning process. (Anwar and Mathew, 2014)

Results of a study indicated that teachers have positive attitude but they have not properly integrated Internet into teaching and learning as they have limited knowledge about ICT and network technology and are not given enough time to learn. Most teachers believe by integrating ICT in learning can develop the confidence in students to have better communication by enabling them to express their ideas, creation and imagination and helps to acquire necessary information and knowledge. (Ghavifekr and Rosdy,2015)

Objective:

* To study the gender wise perceived self confidence in integrating ICT in management education.

* TO study the age wise perceived self confidence in integrating ICT in management education.

Hypothesis

Ho1: There is no significant difference between male and female professors in perceived self confidence in integrating ICT in management education.

Ho2: There is no significant difference between professors of different age groups in perceived self confidence in integrating ICT in management education.

Research Methodology

To explore the perceived self confidence in using ICT in teaching methods by professors in management education a self structured questionnaire was given to 100 respondents randomly, but only 81 were found to be appropriate for the application of test. Cronbach alpha was used to check the reliability of data. Anova was applied for hypothesis testing.
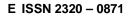
Sample composition

Gender

Among 81 respondents 38 were male professors while 43 were female professors who were analyzed for perceived self confidence in using ICT for management education in Indore city.

Age

There were 15 respondents having age less than 30 while 66 respondents were in the bracket of age of more than 30.

Results

- Out of 81 respondents 39.5% were highly agree with the point of ease with the idea of the computer as a tool in teaching and learning while 45.6% were agree, 9.8% were found to be neutral having no opinion in regard to this while 4.9% were not feeling ease in using computer as tool of teaching and learning.

- 9.8% of the respondents were highly disagree that the use of computers in teaching and learning stresses out, and 23.45% were disagree while 25.9% respondents were neutral about the fact and 40.68% were agree that technology and use of ICT in teaching and learning stresses them out.

- 30.8% respondents are qualified enough to rectify the matter if something goes wrong in the use of ICT in teaching learning process, while 32% of them are not capable of handling the situation and rest 37% respondents are neutral with the statement.

- Almost 50.5% of the respondents are convinced with the use of computers in teaching and learning process while 31% of the respondents are reluctant with the use of ICT and 18.5% of them are having no views about it.

- Use of ICT in teaching and learning process motivates about only 9.8% respondents while 75.2% of the respondents have no motivation in using ICT in teaching and learning process and 14.8% of them are merely using it with the motive of use only. It can be concluded here that 90.2% of the professors are using it by force or compulsion.

- About 48% of the professors are frightened with the concept of use of ICT in teaching and learning process while 40.6% of them are using with ease and 11.1% of them are using without any feeling.

- 86.4% of the professors agree with the statement that computers is a valuable tool for them though they are frightened in using them as revealed in earlier questions, while 4.9% of them are having negative thoughts in regard to this and 8.6% are neutral.

- 78.9% of the professors are of the view that computers transform their personality and the way of teaching has become more effective, on the other side 4.8% are of the opinion that there is no transformation in personality and effectiveness in teaching.

- 65.3% of the professors believe that students learning process is also been transformed with the use of computers while 27.1% of the professors are neutral with the statement and 7.3% of the professors disbelieve the fact.

- 37% of the professors firmly believe that they are equally competent and they don't require use of ICT in teaching learning process on the other side 27% of the respondents believes in the effectiveness of use of ICT.
- 38.4% of the professors are of the opinion that computers are not user friendly and thus it is not beneficial from the students learning point of view. On the other side, equal number of the professors, deny the fact and found it user friendly while 22.2% are neutral to the fact.
- Almost 69% of the professors firmly believe that computers made learning process effective for the students, while 20.9% of them are of negative views and rest 16% have no views in regard to this.
- 73.7% of the professors thought that innovativeness and uniqueness are the two important features which make the computers a better source of learning for the students while 7.4% of them deny this fact and 19.7% are of no opinion.
- The computers increases the effectiveness in teaching of professors are agreed upon by 77.6% while 17.2% are neutral and 4.9% only of the view that it makes no changes in teaching process.
- Technology makes the thing easier while at lot many important places it creates problems too is being agreed upon by 48.1% of the professors, while 30.8% of the professors do not believe in technological problem and rest 20% of them are neutral to the point of technological error.
- There are so many software in ICT and 72.8% of the professors are frequently using them in their teaching process to make them effective and impressive along with easiness, while only 8.6% are not using them and 18.5% are neutral to the fact.
- Almost 74% of the professors make the use of power point presentations in teaching process in their class; on the other hand 7.3% are making no use of it while 18.51% are without any thought process. Learning process with activities and exercises makes them interesting and effective and 69.1% of the professors make use of computers in designing technology enhanced learning process while 30.8% of them are not practicing it and 37.03% are neutral with the fact.
- Almost 79% of the professors make use of e-mails to communicate with their students regarding assignments, notes, study material and notification. It makes the communication easier, faster and economical. 4.9% follows the traditional way to communicate with the students and 16.04% did not make aware about it.
- Business schools are of the habit to give many creative, innovative projects and assignments to the students to make them practical learner and in this series 75.2% of the professors help their students to make use of specific softwares in their projects to make it a better one and to equip know how to use it. Almost 11% of them disagree to the fact and 13.5% are neutral to the fact.
- 60.4% of the professors are technically sound and thus they are helping their students to increase their knowhow and make their own web page. If they opt for business or entrepreneurial network it may give them lot of benefits in future. While 13.5% are not helping students in this field and 25.9% are neutral to the point.
- Earlier it was difficult to access the knowledge available worldwide, but now internet made it easier, and 78.9% of the professors update themselves so that they can give latest facts and figures to their students. Only 4.9 % of them are not using internet for their classes while 16.04% are neutral to the point.
- 85.1% of the professors are having firm opinion that power point presentations, use of software, e-mail, and internet etc., facility makes the learning process easier for the students and ICT is a revolutionary step in the field of teaching and learning. While 8.3% deny this fact and 7.4% are neutral.

Reliability Analysis - Scale (Cronbach's Alpha)

In the preliminary analysis data obtained was analyzed using SPSS 17. Reliability and validity check was done and the reliability statistics shows the value of Cronbach's alpha as 0.739 which is closer to 1.00 which shows that internal consistency is good hence the data is reliable for 81 No. of Cases and 23 No. of Items.

Hypothesis Based Analysis

Ho1: There is no significant difference between male and female professors in perceived self confidence in integrating ICT in management education.

The table (Appendix 4) shows that there were 38 male and 43 female respondents and the calculated value of $F(1, 79) = 1.046$ at 5 percent level of significance. Since the p-value is 0.310 ($p > 0.05$), we accept the null hypothesis and conclude that there is no significant difference between male and female professors in perceived self confidence in integrating ICT in management education. It reveals that male and female employees with no different level of integrating ICT in management education.

Ho2: There is no significant difference between professors of different age groups in perceived self confidence in integrating ICT in management education.

The table (Appendix 4) shows that there were 15 respondents who were less than or equal to age of 30 and 66 respondents were above 30 age. According to table, the calculated value of $F(1, 79) = 0.395$ at 5 percent level of significance. Since the p-value is 0.532 ($p > 0.05$), we accept the null hypothesis and conclude that there is no significant difference of age on perceived self confidence in integrating ICT in management education.

Discussion

On interviewing a couple of professors from management institutes of Indore city, it was found that use of computers and ICT make their professional life easy. Everyday innovations and know-how make certain things difficult but to be update in front of budding managers motivate them to learn those things to be a good mentor. Power point presentations, e-assignment notification and submission, skype presentation and online tutorials and classes are the innovative steps towards use of IT in teaching learning process. It makes the system easy and friendly for the students too.

Professors used to update and brush up their technological knowledge through the conduction of regular faculty development programme (FDP).Yet there are many senior faculties reluctant to unveil the threshold of their knowledge with the application of ICT.

Conclusion

From the present study following points are clear that:

There is no significant difference in male and female professors in using ICT in management education. There is no gender wise discrimination in application of ICT and other innovative tools in management teaching. Males and females are equivalent in application of creative techniques and innovative tools to make their lectures attractive and appealing one along with effective learning outcome.

In the subsequent hypothesis it is being revealed that age is not the limiting factor in the application of ICT in teaching learning process. Generally it is perceived that professors in the age bracket of less than 30 are young enough and user friendly to ICT techniques and keen to develop themselves to new upcoming knowledge trend. The present study explored that professors in the age bracket more than 30 are also ready to involve newer concepts and creative solutions in their teaching methodology to give students a better outcome of experience blend with technology.

ICT and other creative methods are providing a new insight to teaching methodology. It is on upper hand to traditional method of teaching where methods were restricted to only blackboard

and notes. Now the teaching methodology is the treasure chest filled with many innovative, easy to use and effective in learning techniques:

Case Based teaching

Using Power Point Presentation

Using Overhead Projector

Management Games

Learning Activities

Practical Exercises

Audio- Video Clippings

Accessing library worldwide

These methods on application in teaching create a healthy learning environment where students take initiative to explore more and build the concepts.

Future Implications

The present study is limited to only two factors that are gender and age in exploring perceived self confidence in using ICT in management education by professors. The further research can be carried on with other demographic factors. Another angle to the study can also be introduced by exploring determinants on application of Factor Analysis. That will classify the questions into reduced number of dimensions.

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Appendix

Reliability Analysis - Scale (Cronbach's Alpha)

Case Processing Summary		N	%
Cases	Valid	81	100.0
	Excluded[a]	0	.0
	Total	81	100.0
a. Listwise deletion based on all variables in the procedure.			

Reliability Statistics	
Cronbach's Alpha	N of Items
.739	23

Hypothesis Based Analysis

Ho1: There is no significant difference between male and female professors in perceived self confidence in integrating ICT in management education.

Descriptive – Gender								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Male	38	3.7288	.42963	.06970	3.5876	3.8700	2.48	4.43
Female	43	3.6390	.36048	.05497	3.5281	3.7500	2.96	4.30
Total	81	3.6812	.39449	.04383	3.5939	3.7684	2.48	4.43

ANOVA – Gender					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.163	1	.163	1.046	.310
Within Groups	12.287	79	.156		
Total	12.450	80			

Ho2: There is no significant difference between professors of different age groups in perceived self confidence in integrating ICT in management education

Descriptive – Age								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
<= 30 Age	15	3.7391	.35551	.09179	3.5423	3.9360	2.96	4.30
>30 Age	66	3.6680	.40418	.04975	3.5686	3.7673	2.48	4.43
Total	81	3.6812	.39449	.04383	3.5939	3.7684	2.48	4.43

ANOVA - Age					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.062	1	.062	.395	.532
Within Groups	12.388	79	.157		
Total	12.450	80			