"The Integration of Information Technology in Higher Education: A study of faculty's attitude towards IT adoption in the teaching process

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Abstract

Today the changes brought about by new technology had a significant effect on the life of people living in every corner of the globe. Traditional process of teaching and learning in education has been replaced by new and emerging technologies. Information Technology is having a major impact on all areas of education-curriculum, methods of teaching, classroom learning etc. Rapid communication with increased access of Information Technology (IT) in home, work place and educational institutions has make education a life-long process. Information technology helps in promoting opportunities of knowledge sharing throughout the world. These can help facultys and students in gaining up-to-date information and knowledge. For effective teaching and learning right information is necessary. Information technology is a set of tools that can help the right people with the right information at the right time. This paper highlights the importance of IT in educational sector, impact of IT on classroom teaching, advantages and disadvantages of IT.

Key Words: Information Technology, Teaching-learning process, Communication, Internet, Computer.

INTRODUCTION:

Today knowledge and information are the main keys of obtaining the productivity, competition, wealth and comfort. So, human beings have concentrated on approaches for gaining better quality of education. Education in the 21stcentury is the centre from which all changes and developments arise. Today information technology has the ability of facilitating the education and learning process. Information technology is referred to the knowledge process and its applying methods, processing, transferring and making information in progress IT includes gathering, organizing, storing, publishing and using the information in the form of sound ,picture graphic, text, number by using the computer and telecommunication tolls. Important changesresulting from IT, has became the source of basic changes in the classes. The most important changes have roots in this fact that technology has enabled students to accent the out-of-class information and this has caused the increase of their motivations for learning. Information Technology has affected changed to the methods, purpose and perceived potential of education. Information technology can provide necessary educational information when needed.

Technology is bound to rule our present and our future. This is an escapable fact that we need to face. It has ruled over different facets of our life and influenced the way we live. Computers and the Internet technology in particular have undoubtedly revolutionized the field of education. It plays an important role in this field. The student faculty interaction has drastically changed since the introduction of technology based class structure. The faculty is no longer the centre of the classroom but rather a middleman between information and student. Instead of a being passive listener, the students now become active in gaining, rearranging and displaying information.

NEED OF THE STUDY:

Both education and learning is life time processes, they have no limit of when to start and stop. Learning helps in gaining new experiences in our everyday life, thus changing our way of thinking, living and judging human behavior. Through education students are getting various types of information. Information technology has the ability of speeding up information delivery so this ability can be used in improving teaching-learning environment. Both facultys and students are using various technologies to achieve specific academic goals. Information technologies have reduced the cost of education. For example the increased use of internet broadband makes it easy for students to access academic information on time. Also facultys use this broadband internet to create and deliver information using videos and graphic illustrations. It enables faculties and students to communicate with each other through electronic email. Information technology speeds the transfer and distribution of information. Through online examinations students are getting degrees which make them fit for better employment. Today educational institutions publish their results online so students need not have to wait for long to know about their performance. IT also facilitates group discussion. Information technology has changed the way pupil learns through introduction of audio-visual techniques in education. The level of integration of information technologies by faculties into their teaching methods may be influenced by a number of factors. More information is necessary to determine the critical factors influencing faculty's decision to adopt technologies in to their courses. There are no studies to date, that research about the faculty's intention to use education technologies in Bangalore. Also it is little known about the level of integration of information technologies in Bangalore higher education. Therefore this study aimed to address such issues by trying to identify the critical factors that influence Bangalore University faculty's intention to use educational technologies in their class room and courses.

STATEMENT OF THE PROBLEM:

The integration of Information Technology in Higher Education: A study of faculty's attitude towards IT adoption in the teaching process.

REVIEW OF LITERATURE:

Information technology is defined has combination of the processes and tools involved in addressing the educational needs and problems by using computers and other related electronic resources and technologies. Applications of information technology in education are commonly referred as educational technologies. Some of the examples of IT in education includes wireless connectivity, using online learning Management systems, internet technologies, merged technologies, high speed communication infrastructures, emerging technologies for visual presentation, accessing course materials through internet resources and artificial intelligence.

We can classify the educational technologies into three main categories: **1) Instructional, 2) Productivity, 3) Administrative.**

Today most of the academics are utilizing the applications of Information Technologies for their teaching purposes such as tutorials, researching, simulations and other forms of instructions. Faculties' usages of online Learning systems are also quite common. Bernard &Abrami (2004) suggested that recent usage of educational technologies increased use of collaborative learning among faculties and students which promotes the constructivist approaches in education. While an application of information technology brings a lot of benefits to the academic world, it also possesses a few challenges. Schmidt

suggested that "effectively replacing the traditional class rooms is one of the greatest challenges in placing the course on the internet". Educational Practice using information technologies should bring over all teaching and learning to a higher level quality of online learning should be equal or higher than the quality of education in the traditional classrooms. In research works identified the major challenges to adopting technology for teaching and learning. Pointed out that unreliability, poor faculty proficiency in technology, resistance to use new technologies lack of institutional support are the major challenges for integration and use of information technology in educational environments.

The Technology Acceptance Model this popular theory in Technology adoption area rooted from another well-known theory in Human Psychology, the Theory of Reasoned Action. TRA proposed that individual's beliefs will influence their attitudes which intern influence their intention and then generate the behaviour. Considering the determined of IT adoption as proposed by Davis (1989), perceived usefulness refers to the extent to which a person believes that using an Information system would enhance his or her work performance. Another important determinant of IT adoption is the perceived ease of use. Perceived ease of use refers to the extent to which an individual believes that using an information system us hassle free and free of mental effort.

Throughout the years TAM has been tested, validated and extended by various researchers due to its power to predict the usage and adoption of Information Systems. For this research, TAM is selected as the base of the conceptual model, not only due to its popularity but also it has been used in various management education research suggest university faculties represent an unusual population individuals who are highly educated, expected to having considerable autonomy, and most commonly working in a highly politicized environment". Therefore studying about their intention to use Information Technology for teaching and learning based on TAM represents a unique contribution to the Technology and higher education domain.

Computer self- efficacy refers to individual's judgment about their ability to use computers in various situations. Computer self efficiency has often been regarded as an important construct in technology adoption studies opined that individual's beliefs about an Information system have significant influence on their usage behavior. Researchers study about computer self efficiency generally agree that there is a positive relationship exist between computer self efficiency and IT adoption in study conducted among 978 found that computer self-efficiency is positively related to computer usage. Suggested that although here results of their research supported the positive relationship between computer self efficiency and use technology and use of technology, further research is necessary to support the relationships especially with a wide variety of educational technologies. Therefore it is important to understand the faculty computer self efficiency while measuring their intention to adopt computers for teaching and learning process. Thus the following hypothesis is proposed.

Computer anxiety refers to the fears about the implications of computer usage such as loosing data or making any serious mistakes. Computer anxiety was defined as "the fear or apprehension felt by individual when they used computers, or when they considered the possibility of computer utilization". Similar to computer self efficiency, computer anxiety also placed a significant role in the adoption of information systems. In a study conducted among 116 electronic spreadsheet users,

proved that individuals with high computer anxiety perceive computer based applications are less easy to use. In another study conducted among 45 executive MBA students found that computer anxiety is negatively influencing perceived ease of use of e-earning system. Found in their study that Computer self efficacy and computer anxiety are having negative association with each other. Previous literature related to computer anxiety shows that computer self- efficacy negatively influences an individual's computer anxiety based on the above literature support, this study tests the following hypothesis.

Computer experience can be defined as an individual's exposure to using computers and the skills and abilities he/she gains through using computers. Prior experience in using computers is a significant influence of whether and to what extent a faculty will use information technology for teaching purpose. We have adequate evidence that computer experience plays an important role in technology acceptance. While introducing the unified theory of acceptance and use of technology found that computer experiences a key moderator of other key variables in the model. In an empirical study about the influence of prior intention to use IT such as perceived ease of use and perceived attitude.

Relative advantage refers to the "degree to which an innovation is being perceived as better than its precursor". In an academic defined relative advantage as degree to which lecturers perceive a new technology as superior to its substitutes". Relative advantage has its root from the Diffusion Theory. This construct has been extensively used in the Information Technology adoption studies by many names such as perceived usefulness, relative advantage, and extrinsic motivation. Found that relative advantage is one of the strongest predictors of intention to use of an information technology. The same relationships were proved by many previous studies in various contexts. This study presumes that relative advantage is positively correlated with perceived ease of use of an Information Technology. That means, the lecturers who believe that using Information Technology applications will enhance their teaching and learning activities are more likely to perceive those technologies easy to use. Therefore, this study proposes to test the following hypothesis.

Compatibility refers to the degree to which a potential adopter perceive an innovation is consistent with his or her socio cultural values, beliefs, needs and his or her past experiences. An individual will more likely to adopt an innovation if it is consistent with his beliefs, values and customs, many previous studies in the field of IT adoption identified that compatibility is an important antecedent of attitude towards using a system.

Perceived ease of use is one of the most popular constructs in the IT adoption studies ever since its introduction in the Technology Acceptance Model. It defines perceived ease use as "the degree to which a person believes that using a system will be free from efforts. For this study, we can consider perceived ease of use as the degree to which an educational technology is perceived as easy to understand and use.

Attitude is defined as "a disposition to respond favorably or unfavorably to an object, person, institution, or event" in the Theory of Planned Behavior. Well known behavioral models such as Theory of Reasoned Actions. Theory of Planned Behavior Technology acceptance modal etc., were identified effect of attitude on an individuals' behavior. Behavioral theories pointed out that it is the positive attitude of the individuals' leads to his behavioral actions. Even though we have many instructional technologies that can enhance higher education, "those will not be used by faculty members unless they possess the skills,

knowledge and attitudes necessary to infuse it into the curriculum" pointed that successful implementation of information technologies in education depends on the attitude of the educators who finally decide how they are used in the teaching process.

According to the Diffusion of Innovations Theory, it is found that people's attitude towards a technology is one of the key elements to its adoption. The Technology Acceptance Model also conveyed the same message of having a positive attitude towards a technology before his/her acceptance of the technology. It is found that attitude towards computer positively influence their intention to use computers for online learning methods. Commented that if the faculty's and students are having more positive attitude towards using computers for teaching and learning they will be more satisfied and effective users of e-learning technologies.

RESEARCH METHODOLOGY

RESEARCH QUESTION:

More specifically Studies investigate the following research question:

1. What is the perception of faculties in Bangalore region towards integrating Information Technologies into Higher education?

2. What are the significant factors influencing Bangalore college faculty to adopt IT in the teaching process?

3. What is the relative significant of each of this factor in influencing the educational technology adoption?

The main aim of the study was to find out effective faculty's from amongst the general faculty's population. An attempt was also to be made to examine relationship of faculty effectiveness with professional attitude. Thus the problem is stated as the study of faculty effectiveness in relation to attitude of lecturers towards teaching profession. It is assumed that effectiveness of lectures depends to a considerable extent on his attitude towards profession studies conducted in this report controversial results my occurs due to relation between faculty's effectiveness and Professional attitude is concerned, though professional attitude of lectures is a vital factor which determines his/her effectiveness.

OBJECTIVES OF THE STUDY:

The researcher seeks to meet the following research objectives in this study:

(a) To evaluate the extent to which the Bangalore colleges have adopted Information Technology in Higher education.

(b) To determine the relationship between faculty's attitude and teaching process in Higher education.

(c) To find out the integration of IT adoption in Bangalore colleges, in general, and on students' response, in class.

HYPOTHESIS OF THE STUDY:

H1: There will be positively influence on adoption of educational Information Technology in Bangalore colleges in Higher education.

H2: There will be the relationship between faculty's attitude and teaching process in Higher education. Therefore faculty's computer self-efficacy might influences positively in teaching process on students of higher education.

H3: There will be positively influence of integration on IT adoption in Bangalore colleges, in general, and on response will be increased of students ease on use of educational technology in Higher education.

METHODOLOGY:

This study used both paper based and web based questionnaire for collecting information from the respondents. The population for this study consisted of fulltime faculty members of higher education. This study used both paper based and web based questionnaire for collecting information from the respondents. The population for this study consisted of fulltime faculty members of higher education. Due to the limited period for data collection and the difficulties to contact professors of various colleges, snow ball sampling method has been employed. Initially selected 30 full time faculty members of Bangalore, colleges where the researcher is working and completed the paper based survey from them. Later, each of those respondents were requested to provide the e-mail addresses of at least 3 faculties they are corresponding with and later emailed the link of the online version of the questionnaire to nearly 30 full time lecturers of various Bangalore colleges.

In this research, quantitative methodology was used to collect and analyze the dataobtained from all the respondents. The researchers developed the questionnaire will be finalized it before being distributed to the targeted group of respondents. The data was collected through random distribution and some of the questionnaires were sent to respondents' email few sections on the questionnaire were designed specifically to address research objectives in regard with the effectiveness of IT integration for students in learning and effective elements of IT integration in Bangalore colleges. Therefore, the questionnaire would be distributed to obtain the data from the respondents.

POPULATION AND SAMPLING:

The overall total of respondents for this research was 32faculty's from Bangalore College's respondents with teaching background regardless of gender, race, teaching experience as well as highest teaching experience. There are no preferences set by the researchers as long as the respondents come with teaching background especially in Bangalore colleges. Since the targeted respondents for this research are meant for individuals with teaching background, the researchers tried to get especially faculties from Bangalore colleges to be part of this research.

INSTRUMENT / TOOLS USED FOR THE STUDY:

A survey questionnaire with a total of approximately 25 items would use as the main instrument in this study to analyze the effectiveness of IT integration in teaching and learning in Bangalore colleges. The questionnaire has been distributed to 32 faculty educators randomly through online by emails and watsapp for faculties of Bangalore Colleges only.

1. BENEFITS TO STUDENT:

a) *Promotes independent learning for the students-*

Students can learn from their own without the assistance of parents and faculty's. They are just going to surf the internet in order to look for the lessons they need to study. Quick accessibility and well equipped with skills and knowledge in operating a computer would be very helpful for the students.

b) *Easier access to information-*

Through computers students can get a huge amount of information. They do not have to depend always on books and class lectures. The information they need is easily accessed on computer.

c) *Promotes exciting way to educate students-*

Since there are videos, images and other graphs and text

found in computer more students would feel the excitement in studying through the use of gadget. This motivates students for studying.

d) *Accessibility and wider participation-*

The emergence of online classes opens doors to many students who could not otherwise participate in educational settings due to time and financial limitations. Online courses offer the non-traditional students the chance to go back to college in this pandemic situation of COVID-19 and improve their live classes according to their own schedule.

e) *Prepares students for the future-*

From the way technological advancements are going it will be obvious that the future will be digital and technology focused. Well-versed use of technologies will help students in collaborating, communicating, competing and finding better jobs in future.

f) *Co-operative learning-*

The internet facilitates co-operative learning, encourages dialogue, and creates a more engaging classroom. For e.g. a LISTSER V will allow students to get involved in class discussions through e-mails, Zoom meet and Google meet help, in a way which is not possible within the four walls of the classroom in Higher education.

g) *Locating research materials-*

There are many more resources on the internet which a college or a university library can't provide. Students pursuing higher education can use these resources of internet for their research work.

h) *Acquiring varied writing skills-*

Internet helps students to develop their hypertext skills. These skills help students to gain experience in non-sequential writings.

2. BENEFITS TO FACULTY:

a) IT facilitates sharing of resources, expertise and advice.

b) It ensures greater flexibility for faculty's for carrying out different kinds of task at different times.

c) IT promotes skills, confidence and enthusiasm of facultys through various teaching techniques.

d) It helps faculty's in easier planning, preparation of lessons and designing of teaching learning materials.

e) Through graphics, pictures and PPT faculty's can present the material in more interesting and attractive ways.

f) Faculty can guide and help students in searching the qualitative material.

g) Students learn by interactive technologies and faculty facilitates them on how to use and reflect responses. He may be diagnosing learning problems and helping students in finding their solutions.

h) By using modern technological devices faculty's can expand their knowledge and develop their professional teaching skills.

DELIMITATION OF THE STUDY:

Information Technology suffers from some delimitation. Some researchers consider them disruptive in educational process. Some of which are mentioned below:

1. Absence of faculty:

Compared with traditional methods, face-to-face and lively communication does not exist in e-learning. This can cause negative effects on academic progression and characteristic

development of students. However, with continuous and rapid technological advances, this problem is becoming less frequent. Nowadays learners can interact and cooperate well together using information and communication technologies. Nonetheless because of the nature of agricultural education, there seems necessary for someone who can master practical courses and supervise students and their operation.

2. Access to unsupportive information:

In this type of training, learner sometimes access to erroneous information on the Internet which is not scientifically confirmed and therefore unsupportive to refer. Using this type information may cause confusion and making it difficult for individual learning.

3. Students' assessment and feedback is limited:

The Internet provides a wonderful opportunity to get all kinds of information back and forth, but it also makes it harder to assess some types of students' feedback and knowledge.

4. Being unsuitable for practical courses in agricultural education:

Learning can provide training for students in agricultural education, but education should be such that learners would be able to test their performance and get master in visualizing. There is no advantage in memorizing the content of course as a parrot and transfer it haphazardly to others. In this case, we are just consuming the knowledge and do not get to the deep of knowledge. Conveniences of E-learn.

ANALYSIS, INTERPRETATION AND DISCUSSION

Description		Frequency	Percent
Gender	Male	20	58.8
	Female	14	41.2
	Total	34	100.0
Age group	25-35	11	32.4
	35-45	11	32.4
	45-55	9	26.5
	55-65	3	8.8
	Total	34	100.0
Position	Professor	7	20.6
	Associate Professor	10	29.4
	Assistant Professor	14	41.2
	Lecturer	3	8.8
	Total	34	100.0
Qualification	PhD	17	50.0
	MPhil or MTech	7	20.6
	Master's	10	29.4
	Total	34	100.0
Experience	5 or <5 years	6	17.6
	6-15 years	13	38.2
	16-25 years	8	23.5
	25-35 Years	6	17.6
	more then 35 Years	1	2.9
	Total	34	100.0
DISCIPLINE	Engineering and Technology	18	52.9
	Business of Management	6	17.6

Description		Frequency	Percent
Gender	Male	20	58.8
	Social Sciences	2	5.9
	Sciences	1	2.9
	B.Ed	5	14.7
	Other	2	5.9
	Total	4	100.0
most frequently to access the Internet	Smartphone	32	94.1
	Tablet or iPad	2	5.9
comfort level with the following computer-related activities	Expertise level (Trainer)	10	29.4
	User level (Advanced)	13	38.2
	User level (Intermediate)	9	26.5
	User level (Basic)	2	5.9
Account on a social media platform(s)	Facebook	27	79.4
	Google+	2	5.9
	LinkedIn	3	8.8
	Social bookmarking sites (Delicious, ScoopIt, Pinterest, etc.)	1	2.9
	Total	33	97.1
Resources/ services/ spaces provided by your college.	Poor	3	8.8
	Fair	11	32.4
	Neutral	2	5.9
	Good	15	44.1
	Excellent	3	8.8
	Total	34	100.0
Nature of the classes that you teach	Traditional face-to-face	14	41.2
	Completely online	5	14.7
	Blended, where some components of the study are done online.	15	44.1
	Total	34	100.0
digital resources/ platforms in your teaching	Always	11	32.4
	Often	13	38.2

Description		Frequency	Percent
	Sometimes	8	23.5
	Rarely	2	5.9
	Total	34	100.0
created and shared the following teaching and learning material	Images (pictures, photographs, including from	4	11.8
	Presentations (e.g. PowerPoint, including from	20	58.8
	Word files (activity sheets/handouts/ notes)	20	20.6
	Blogs	2	5.9
	Course packs	1	2.9
	Total	34	100.0
received training on the use of ICTs for teaching and learning	Yes	20	58.8
	No	14	41.2
institution provide regular training on the use of new technologies for teaching and learning	Yes	24	70.6
	No	10	29.4
ever partici -pated in any online training	Yes	28	82.4
	No	6	17.6
MOOC platforms are you aware of	Coursera	24	70.6
	Udacity	1	2.9
	Udemy	3	8.8
	None	6	17.6
experiences with the following resources/ services/spaces provided by your institution	Poor	5	14.7
	Fair	8	23.5
	Neutral	7	20.6
	Good	9	26.5
	Excellent	3	8.8
	Not available	1	2.9
	Total	33	97.1

Description		Frequency	Percent
1echnology-Enabled Learning can solve many of our educational problems	Strongly Agree	11	32.4
	Agree	17	50.0
	Neither Agree nor Disagree	6	17.6
barriers to your use of Technology-Enabled Learning	Lack of technical support in the Institution	24	70.6
	Lack of training on Technology-Enables Learning	3	8.8

Description		Frequency	Percent
	Concern about students' access to Technology	2	5.9
	Inadequate availability of hardware and software	3	8.8
	Lack of instructional design support for Technology-Enabled Learning	2	5.9

HYPOTHESIS TESTING

HYPOTHESIS 1

H0: There is no positively influence on adoption of educational Information Technology in Bangalore colleges in Higher education..

H1: There is positively influence on adoption of educational Information Technology in Bangalore colleges in Higher education.

One-Sample Test

	T	DF	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
How often do you use the following Open Educational Resource (OER) platforms for your teaching and learning	9.241	33	.000	2.618	2.04	3.19
Please indicate how often you use the following digital resources/platforms in your teaching.	13.089	33	.000	2.029	1.17	2.34

Interpretation:

The result shows in independent t-test means, that the use of Information Technology tools in teaching and learning in the classroom of the male (M=2.62, SD=1.652) Open EducationalResource platforms for teaching and learning is higher then (M=2.03, SD=.904) is insignificant, t=.9.241, d.f.=33,p=.000,however,since the p<.05 so the null hypothesis is accepted and alternate hypothesis is accepted, and the means of two groups are significantly different from each other. Thus, the data provide sufficient evidence to conclude that the use of Information Technology in teaching and there is positively influence on adoption of educational Information Technology in Bangalore colleges in Higher education.

HYPOTHESIS 2

H0: There willnot bethe relationship between faculty's attitude and teaching process in Higher education. Therefore faculty's computer self-efficacy might influences positively in teaching process on students of higher education.

H1: There will be the relationship between faculty's attitude and teaching process in Higher education. Therefore faculty's computer self-efficacy might influences positively in teaching process on students of higher education.

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Does your institution provide regular training on the use of new technologies for teaching and learning	Equal variances assumed	.430	.519	.305	22	.763	.067	.221	-.390	.525
	Equal variances not assumed			.306	11.343	0.765	.067	.220	-.415	.549

Interpretation:

The result shows in independent t-test means, that the use of Information Technology tools in teaching and learning in the classroom of the male (M=1.35, SD=.493) is higher than the use of Information Technology tools in teaching and learning in the classroom learning of the female (M=1.29, SD=.488) is insignificant, t=.3.6, d.f.=11.343,p=.763,however,since the p<.05 so the null hypothesis is accepted and alternate hypothesis is accepted, and the means of two groups are significantly different from each other. Thus, the data provide sufficient evidence to conclude that, there will be the relationship between faculty's attitude and teaching process in Higher education. Therefore faculty's computer self-efficacy might influences positively in teaching process on students of higher education

HYPOTHESIS 3

H0: There will not be positively influence of integration on IT adoption in Bangalore colleges, in general, and on response will be increased of students ease on use of educational technology in Higher education.

H1:There will be positively influence of integration on IT adoption in Bangalore colleges, in general, and on response will be increased of students ease on use of educational technology in Higher education.

One-Sample Test

	Test Value = 0					
	T	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
How often do you use the following Open Educational Resource (OER) platforms for your teaching and learning	9.241	33	.000	2.618	2.04	3.19
Please indicate how often you use the following digital resources/platforms in your teaching.	13.089	33	.000	2.029	1.17	2.34

Interpretation:

The result shows in independent t-test means, that the use of Information Technology tools in teaching and learning in the classroom of (M=2.62, SD=.1.652) is higher than the use of Information Technology tools in teaching and learning in the classroom learning of the female (M=2.03, SD=.904) is insignificant, t=9.241, d.f.=33,p=2.04.,however,since the p<.05 so the null hypothesis is accepted and alternate hypothesis is accepted, and the means of two groups are significantly different from each other. Thus, the data provide sufficient evidence to conclude that, there will be positively influence of integration on IT adoption in Bangalore , in general, and on response will be increased of students ease on use of educational technology in Higher education.

Discussion:

Technological innovations are not necessarily pedagogical innovations. If the Facultys' goals are mainly directed towards contents and knowledge acquisition, new technologies do not change very much. For instance, in many cases MOOC environments are mainly used for structuring and organizing learning materials. There is not very much space for knowledge creation. Originally, MOOCs were started in Bangalore Engineering Colleges and other degrees colleges. They were heavily integrated around social media. Commercial MOOC approaches are more often integrated in very traditional ways.

Flipped classroom is more likely to flip the logic of learning than MOOCs.This approach is quite new, and the best sources to learn about it may be found in Twitter. Learning compensate for the lack of literature. Flipped classroom means that instead of using contact time for knowledge transmission, the students or pupils acquire the needed information. A new kind of educational leadership required to change Colleges teaching process.

Developing new learning environments and positioning them successfully into operation requires a corresponding supportive atmosphere and culture. Technologybased solutions can improve learning results only if the surrounding social practices are updated and revised accordingly. However, the pedagogical shift is not the only factor that is challenging the operative working culture in colleges' context also the amount of administration and responsibilities has increased and thus reduced the time available for pedagogical development work.

Statistical Treatment

The statistical method used in this study is follows.Mean, Standarddeviation, tests in study of integration of Information Technology in Higher Education: A study of faculty's attitude towards IT adoption in the teaching process.

SUMMARY

Time and liberates the college principle to promote the pedagogical development work at colleges, for instance by participating, encouraging and leading by example, which should be the main role of a modern principal.

Shared leadership also demands collective guidelines to ensure convergence of decision making. This highlights the importance of one's own vision and strategy. Furthermore, Faculty's' ownership of their own work and commitment increases and the shared responsibilities encourage them to implement new practices of collaboration, such as various teams that focus on different responsibilities of their colleges. This kind of cultural transformation led by visionary leadership can be seen as a crucial adaptation for future needs and should influence also the design of new learning environments.

FINDINGS

✓ It is important to base our conclusions on perceiving learning as knowledge creation, rather than emphasizing mere knowledge acquisition. 21st century skills are integral parts of learning.

✓ Learning takes place between people and their cultural surroundings. It is therefore important to develop collective cultural practices, physical learning environments, and institutional routines (e.g. assessment) to support

engagement, innovation, and knowledge creation at colleges. Paradoxically, this can be done by supporting local agency and participation.

✓ The knowledge practices of digital natives are different from previous generations, even though there is no reason to assume that their cognitive system is profoundly different from ours. They have just extended their minds differently with new kinds of tools.

✓ Well-being and Social and Technical Learning are at least as important as other 21st century skills (such as media, Emails, PPt, Video Creation)

✓ Instead of computer-supported learning, it would be advisable to talk about new forms of Socio- Digital Participation (SDP). This includes media literacy, such as using social media and search engines.

✓ There is no evidence that learning styles or types would be informative in designing learning environments. Alternatively, it would be advisable to observe users' motivational profiles or study orientations. Meaningful and engaging learning methods are advisable, which support collaboration and self-regulation.

✓ Pedagogical innovations are needed – technological innovations are often pedagogically weak. Fragmented projects start and end, but fundamental structures remain the same. Systematic development of flipped and inquiry-based learning programs with meaningful use of technologies would be advisable.

✓ We need constant reforms in Colleges and faculty education. The Colleges are not following the important developments of society. We have perhaps spent too much time looking at test results in this modern teaching and learning process in these present conditions of COVID-19.

✓ Education system has taken as challenge to face these pandemic period problems to overcome by conducting Online Classes for teaching and learning process .Ex: Zoom Google meet, Webinars are used.

SUGESSIONS:

✓ Establishing a strong teaching presence for blended and online learning environments differs markedly from doing so in a face-to-face classroom

✓ While there are some challenges to creating a virtual classroom, there are also many benefits. With a virtual classroom, College faculty's are able to automate content and have it all prepared ahead of time, fully taking advantage of the digital medium and enhancing their teaching time. Prepare video content, readings, assignments, or discussion questions ahead of time so they can save time for actually teaching and helping students develop skills.

✓ Utilizing Technology is crucial to online Faculty's in a wide variety of ways. Colleges must need to use Information Technology in teaching and learning options in order to get the most out of an online learning experience and truly develop the skills they need. There are a wide variety of educational apps and software programs that facultys can and must use to help students in Higher Education.

✓ Colleges can use Video options. Faculties can use video options like Zoom, Jing, Google Classrooms, and more to record online lectures or hold live lessons with their students. These tools are vital to give students a more visual interaction.Screen recordings. Teachers can utilize tools like Zoom and Screencast-o-matic to record their computer screens to help students learn in Higher Education.

✓ Online teaching is becoming more prevalent today, and teachers are required to go beyond their comfort zone to reach students. Technology is extremely useful in helping faculties create meaningful learning environments within an online setting.

Delimitation of the study

✣ The study is limited to only Bangalore colleges.

✣ Covered only urban areas of Bangalore colleges.

✣ The sample is limited to 32 faculties of Bangalore.

CONCLUSION

This study is more related to identifying the perceptions in implementing Information Technology tools in teaching and learning in the classroom among Higher Education faculty educators. Furthermore, it examines the challenges of using Information Technology tools in supporting classroom tor online teaching and learning in the teaching and learning. Based on the study the findings indicate that average level of the perceptions in implementing Information Technology tools in teaching and learning in the online or offline classroom among faculty educators, high level of challenges of using Information Technology tools in teaching and learning in the classroom among faculty educators and recognizing the effectiveness of the extent of Information Technology tools in supporting teaching and learning in the classroom. With the advent of Information Technology in education, facultys from their own belief about the role of Information Technology as a teaching tool, the value of Information Technology for student learning outcomes and their own personal confidence and competency. The barriers are extrinsic to the faculty and include lack of resources, time, access and technical support. Findings of this research suggest that faculty's were still giving comment on the barriers in implementing Information Technology tools at faculty education institution in teaching and learning.

In the end, the transformative power of any technology in Colleges depends on human choices and circumstances. As digital technologies become increasingly ubiquitous in daily life, it becomes ever more important to consider not only how they might contribute to learning, but also why. In other words, some of the works are of ensuring a "digital revolution" in educational policies. However, some of the work is also about good storytelling. Learners will not engage in online learning if they do not subscribe to a vision about its potential benefits. Digital devices will go little used if students and faculties do not envision a new mode of learning in Higher Education. Computer data systems are poor investments if communities and educators do not agree about the end goals of Education and which data conform to those goals. Thus, the challenge of the digital era is as much about making well -informed decisions, as it is a matter of developing insight into what convinces people to make the most of their technologies in the first place.

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