Technology Innovations in Educational Institutions: Faculty Attitudes towards Technology

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Abstract:

This study uses theory to observe faculty contribution and relative to their technology utilization, their attitudes toward technology, and their acceptance of technological innovations such as flow of innovation and survey design. The findings spot several critical issues basic faculty participation and non-partaking, which create implications for policy's and practice; applicable to technology handling and skills, technical hold up, inferiority issues, training & development, amount of work, and reimbursement. The route of implementing the innovative approach to teaching, the educational institutions should aim at preparing competitive employees who can achieve success in the areas of both theoretical and applied economics. The outcomes of the research can be helpful for policymakers in the calculated and outfitted planning process.

Faculties of educational institutions are faced with a decision involving equally unfavorable alternatives. On the one hand, parents and educational institutions, believe that technology will progress the way teachers teach and students learn. As a result, public officials are challenging to combine computer and associated technologies into the classroom. On the other hand, there is a vocal and mounting rebel that questions the worth of computers and other innovative technologies in the classroom.

Keywords: technology innovations; higher education; workforce; teaching and learning

1. Introduction

A technological innovation is an imperative aspect of teaching and learns in the 21st century. Through the lifetime of students, the use of computers, cell phones, android phones, tablet & laptops, students are inward in upper education classrooms more technically linked and socially associated than back. These manageable technologies with online network challenge educators to meet students in the hi-tech world where they reside. Teachers, as the need for technologies existence are more expected, they have to stay with their pedagogical beliefs about teaching with technology in the classroom. In this area, many researches have been conducted; aforesaid technology innovations persuade teacher's adaption towards and make it a part of their lives too. The innovative changes includes digital textbooks, mobile connectivity, video based classes, and many more.

E-Learning is creating a noteworthy transformation in higher learning in this new period. Even as archetype switch from usual methods of teaching to technology-driven wisdom, this has become vital that faculty should be coherent to utilize newest technologies to meet the requirements of all

students. As stated by Prensky, "To create effective 21st-century learning, students need to be allowed to do new things, in new ways, and get a different, and better, education because of the technology. Integration of technology with lectures has become inevitable for valuable training. It has became important for educators to use information technologies whose effect started to be seen especially on education training activities applied in the educational environment and structure of the educational system, effectively. In this respect, it is important for educators to adopt technology, to follow closely, and to exhibit a positive attitude towards technology to use developing technology in the classroom. Therefore, revealing the attitudes of educators towards educational technologies in education is vital and necessary in terms of ensuring the required conditions for efficient use of new technologies in education (Pala, 2006).

Several researchers have found that some barriers are the most challenging for faculties. Hofer and Swan (2011) found that teachers with their limited training and relatively superficial curricula most likely would have set up the implementation of technology quite challenging.

Barriers:

1. Distracted by Technology

2. Lack of Knowledge

3. Insufficient Resources

4. Unreliability of hardware or software platforms

Innovation and Technology

According to Lichtman, innovation is not technology or flipped classrooms but rather how education prepares students for their futures not for our past. Innovations in education encourage teachers and students to explore & research and bring into play all the tools to come across something fresh and innovative.

Innovation involves a diverse way to look at problems and solve them. Innovation or new techs in education compels students to make use of a higher level of thinking to solve complex problems. Students expect learning that matters; learning associated in apt ways to the real world; learning that engages their wellbeing in innovative classrooms. According to the researcher, to integrate innovation into the curriculum and pedagogy, higher education needs to emphasize the Five I's: Imagination, Inquiry, Invention, Implementation, and Initiative into a system that often discourages creative thinking and risk-taking.

Technology Transformation

As the demand for mobile technology and personalized learning propagates, a understandable transformation in the use of technology must occur. It looks like educators to engage students have more choices than yet before. Technology also has the power to transform teaching by ushering in a new model of connected training. This links teachers to their students and to professional content, resources, and systems to help them improve their instruction and personalize education.

Theory for Innovation

In education, innovation can appear as a new pedagogic theory, methodological
approach, teaching technique, instructional tool, learning process or institutional structure that, when
implemented, produces a significant change in teaching techniques; leads to better student learning.

2. Review of the Literature

Davis (1989) developed a model named TAM (Technology Acceptance Model) which is one of the
model based on the idea asserting that using technology, how it affects
the individual's attitude towards technology   and is   utilized
to analyze individual's acceptance of information technology and using behavior (Venkatesh,
Morris, Davis & Davis, 2003; Turan, 2008).

Dogruer, Eyyam and Menevis (2010) conducted research teachers' attitudes towards the use of
educational technology in their classrooms". As per the study, it was verified that even though
teachers agreed that the use of technology in education has an optimistic impact on their experience;
teachers desired more information about the use of pedagogical techniques in their classes.

Kabadayi (2006) conducted a study on part- time teachers and preschool teachers; teachers attitudes
when they are using the educational technology. He concluded that 75% of the teacher's attitude is
constructive when they are using the educational technology during teaching learning process in
classroom and the remaining of them were not clear.

(Bauer & Kenton, 2005), Educational technology is used to improve the teaching learning process.
Technology facilitates and cooperate the students. So the way by which facilitation and cooperation
is provided is called the educational technology (Fulton, 1997). They found that teachers were highly
educated and skilled but they did not use the technology in the instructing learning process.

Jaffee (1997) suggested 4 (four) well quality educational principles which are practiced in the
classroom where technology is included: mediation, learning active, interactivity and collaboration.

3. Methodology

This study is aim to think through the perceptions of faculty members as regards to their intensities
of readiness to fit in innovative technologies for student wisdom. The following research questions
were kept in mind, to bring the purpose of the study:

1. What is the attitude of faculty members' towards technology in the higher education classroom?
2. Identify opportunities for the faculty members for using technologies in the higher education classroom?
3. What are the barriers faced by faculty members for using technologies in the higher education classroom?
4. How do faculty members recognize the future of technology in the higher education classroom?
5. What possible benefit do teachers believe about using the technology to their teaching?
6. How does regular access to technology influence teacher's way of teaching?

Survey was generated assessing faculty members'; profess level of skill and custom practice of
technology in the classroom, attitudes towards its practicability, perceptions of the opportunities,
barriers to its usage, and forecasting of the future of technology in the classroom.

4. Data Analysis

The composite approach of collecting data provides the researchers with an opportunity to conclude both quantitatively and qualitatively data to ensure the productivity of the data. Mutually qualitative queries and the quantitative queries were merged to provide additional acceptance of the faculty member's point of view towards technology.

Face-to-face interviews were conducted. The face-to-face interview method was approached as it supported the scholar to ask comprehensive questions to better acquire answers.

Sample Size: 10 participants targeted mostly teachers from Bhopal.

Guest, Bunce, and Johnson (2006) suggested; sample between 6 and 12 interviews is ample, if the selected group is standardized. To understand and achieve the objective of the research, therefore, the researcher in this project targeted ten participants to ensure enough sample and size to allow the completion of satisfactory sum of interviews.

5. The future of technology

Education technology's future will renovate learning by giving teachers and students a diversity to work with new tools. Education technologies talk about to the merging of technology and education carry out to deliver, assist, and enhance wisdom. Classrooms at present look very different from the classrooms of for a period of ten years. World to come classrooms will have equally different look due to the integration of advanced tech tools, enabling more engagement, effectiveness, inclusive, and modified learning experiences for all students, as changing circumstances amid during COVID - 19 pandemic situation.

Whilst the future of education will be gripped in larger division by technology, ensuring the innovative teaching tools that are put to use for the most part successfully; requires a new age group of educators who appreciate the importance of human interaction in educational settings. Digital technologies are the future of education. Great expertise minds are liable for crafting latest expertise, which they lack before in the past which offered by educators.

Following are some of the new techs introduced in the education system, known to be a part of future of education in regards with technology:

- Social platform in education
- IPad, Androids, Tablets, Smartphones & computers
- Better Substitutes, Simulations and Models
- More efficacious assessment
- Electronic book
- Cognitive Games
- Student's database and fallouts tracing
- Collaborative textbooks & case studies
- Digitalization
- Flexible online learning
- Making learning exciting all over again

- Cost Reduction
- Student-teacher upgraded Interaction
- All-time Learning
- Online + live streaming classes

6. Conclusion

The purpose of the study was to observe how teachers are using technology resources in their teaching practices. The study specifically investigated teacher's attitudes toward using technology.

The future of higher learning is progressively became more focused on opportunities for the faculty members by increasing access to the quality education. To accomplish the aforementioned goals, the educational institutions needs engagement of faculty with hi-techs to become competitive employees; who can achieve success in the areas of both theoretical and applied economics in attaining and maintaining high-quality educational experiences.

The study basically focused on the attitudes of the faculties of educational institutes concerning prospects, obstacles, and the forthcoming of technology in education. The outcomes of this study indicate technology provides faculty members both opportunity and challenges. After the data analysis, results of the current study provide support to the research that faculties from the education institutions are wide open to accept the use of technology. The achievement of any high-tech program, it is embedded with awareness and keenness of teachers and students; to embrace the innovativeness in edification and tuition paradigm. The success of any educational institution in this pandemic has increase the urge of learning and different online delivery methods has been encouraged to a large extent and made faculty members dependent in usage of technology in the classroom and online.

Faculty members noted that with the time if they are technology enhanced; it will facilitate them in future, will facilitate the organization of their courses, enable student collaboration, and put off plagiarism.

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Questionnaire

1. Age: (a) under 25, (b) 25 (c) 35, (d) 45, (e) 45 and up.
2. Gender: a. Female   b. Male
3. What is your highest academic degree?
4. What is your position in your college?
5. How many years of experience in teaching do you have?
6. How frequently do you use computer in your daily life?
7. Did you have any training for using technology in your institution? Please explain.
8. Do you use technology in your teaching? What methods did you use?
9. Describe the university training you received for new high- techs?
10. Define any techs-related professional development training you obtain by yourself?
11. Does the amount of training develop your skills well enough for you to use technology in your teaching?
12. What are possible inhibitors; or, what discourages you from integrating technology in your classroom?
13. What are the possible factors that can inspire you to use technology in teaching?
14. Does your institution support you in using technology inside or outside the classroom? Explain.
15. If the institution provides you all the technical equipment, support, and training that satisfy you, will that change your attitudes and beliefs about technology in teaching?
16. Do you think your attitudes about the importance of technology will change if you learn more about it?