Evaluating University Teacher's Perception about e-teaching During Pandemic in the Higher Educational Institutes of Pakistan

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Abstract

The objective of the research was to identify teacher's readiness towards the acceptance of technology assessment model in e-teaching and identification of the problems faced by the teachers while switching to e-teaching. The nature of the study was qualitative. Data was collected from 04 public sector universities. Purposive sampling technique was used to select the group of the study. Sample consisted of the teachers (male and female) teaching in the teacher training institutes of southern Punjab (Pakistan). 20 teachers from various universities were selected for the interview. Research tool used for the data collection of the study was structure interview. The interview for the teachers consisted of eight questions. The results of the study stated that the teachers faced problem while e-teaching during pandemic related to a number of factors such as social influence, perceived ease of use and perceived usefulness. The teachers may work to integrate e-teaching with conventional learning and be proficient in web-based education platforms.

Keywords: E-teaching, ICT, online teaching, university education, pandemic, COVID,

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Introduction

Universities are transforming their modes of teaching and learning after Pandemic. Increasing pricing, limited resources and growing requirements of education are forcing educational institutions to reconsider educational provisions. This rapid changing environment of the education (E-teaching) is extensively used for the higher education providing vast opportunities for both learners and instructors (Wagner et al., 2008).The sudden growth and progress in education sector ICT utilized for effective teaching learning process in advanced countries like America, Germany, England and China. In emerging countries like Pakistan education sector still depends on the traditional teaching methods. Use of E-teaching may provide cost effective and efficient Education in developed countries.

ICT's is developed as a combination of appropriate methods for the development, transformation and reform of educational systems. Improving the scope of education, gaining power for the educational significance, allows to use ICTs' in the transition of teaching learning to the energetic, pleasant, exciting and active process (Hassan, 2013).The use of modern technologies like E-teaching, blended learning and ICT's to improve education quality of Teacher's in a formal and organized process is called educational technology. This is an organized process of formulating implementation, along with the assessment of the educational procedure i.e., the implementation of modern methods of teaching in teaching-learning as well as, in assistance. It includes teaching content, strategies, work organization and interactions i.e., all participant's behavior in the learning process. The definition of educational technology cannot be stated in single word due to its variety. This variety often contributes to various understanding of education technology, where each author describes in accordance with his/her needs (Lazar, 2015). Three main areas of application of educational technologies are:

- As a tutor (instruction and guidance given by computer)
- As a teaching Tool
- As a learning Tool

The present decade (2010-20) identified the education sector has faced many social, cultural, technological and economic problems which brought transformation in the perception of the teacher's teaching methodologies and strategies. During the days of COVID traditional teaching

methods seemed less effective. Teachers at higher level have to switch their methods and strategies with E-teaching. Education technology aims to eliminate these issues by designing new methods, templates and tools to make teaching learning easier (Januszewski & Molenda, 2013). The COVID-19 has not ended at the national boundaries yet. It has affected the populations regardless of their race, level of education, income or gender. There were no exceptions to education too. The lockdown during the COVID had disrupted traditional education, most of which lasted more than ten weeks. Teachers were to respond to modern pedagogical principles and styles of teaching for which they were not trained to teach with.

In the context of the lockdown; the universities were shut down which affected higher education greatly. The institutions of higher education have rapidly converted face-to-face teaching to online instruction; these closures impaired learning perception of teachers and efficacy of the teaching strategies. The crisis poses concerns, perhaps most important, about the importance of university education which includes networking, social opportunity and educational material. Universities must redesign their learning environment to further broaden and complement digitalization through student/teacher relationship (Schleicher, 2020).

The purpose of the study were to explore teacher's efficacy towards the acceptance of technology assessment model in e-teaching, to understand the problems faced by teachers while switching to e-teaching and to review e-teaching use in formal classroom set up at university level.

Literature Review

Teacher's Perception

Perception refers to person's belief in their capacity to accomplish behaviors essential to produce definite performance fulfillments. Individual behavior change and specially mediators for behavior are characterized with teachers' beliefs in their capability to enhance the level of their learners (Alibakhshi, Nikdel, & Labbaf, 2020). Teacher's perception is their trust in their abilities and that puts positive impact on learner's performance. Teacher's perception about his or her abilities make them more prepared to experiment new approach of teaching to match the needs of their learners; that sense has positive effect on learner's achievement and performance (Shahzad & Naureen, 2017). Classroom management, student's encouragements and motivation, and strong

relationship of students-teachers interaction are different influences of teacher's self-efficacy beliefs. Perception of teacher's ability effects learners achievement which impacts their social, mastery and emotional experiences and affective & physiological conditions. These four sources tend to provide learner at university level an understanding to develop life and academic skills among them (Lankveld, et al. 2020).

(Khairudin et al., 2016) described five key elements on the perception and efficacy of human capitals; some indicators were also listed under each criterion along with examples. Strengthen the perception of faculty members of contemporary technologies: an example of this measure is the provision of essential training and assistance to academic personnel on an ongoing basis on available software. Enhancing the ability of the technical operators; for the starters, some IT members are expected to engage in the technical short-courses on their new e-learning.

E-learning & E-teaching

In the higher educational institutions e-learning is used for virtual learning; besides all the geographical boundaries for formal and informal education. Usually, e-learning refers to the teaching learning experiences which are given or facilitated by the electronic systems (Ong et al., 2004). (Jones, 2003) has restricted the definition of e-learning only to deliver the content through internet. In the broader perspective the e-learning can be defined as; delivering the content through internet, video, audio, satellite broadcasting but also includes the concept of interaction between the participants. In the recent years this definition is expanded by adding the mobile phones and wireless learning application (Kinshuk et al., 2003; Lehner et al., 2003). E-learning is the learner centric strategy which provides self-directivity to the learners by allowing the learners to take initiative and responsibility to define their learning needs (Zhang et al., 2004). The teacher is able to communicate with the students in ways that prevent them of "getting lost" by the unique tools provided by the online technologies to trace the involvement of the learners in the course.

In E-teaching teacher has a real opportunity to participate in discussion with each student personally as each student reacts to particular presentation differently (Muhammad, Afzal, & Ishtiaq, 2020). The skill of the teacher in communicating with students and the way the interaction is conducted is an essential aspect. E-teaching is totally instructor-centered and teachers faced challenges such as technological barriers, lack of institutional preparation and lack of e-teaching

experiences. The traditional teaching shift to E-teaching required the consideration of teacher's skills, workload management, IT skills, and self-regulation (Abid, Zahid, & Shahid, 2021). Current study evaluates university teacher's perception about their self efficacy towards learning during pandemic. However, qualitative data such as; open ended interviews were used for cross verification of the results were ensured with statistically analyzed data. The perception of the prospective teachers was measured by the use of Technology Assessment Model (TAM) which included perceived use, perceived ease of use, behavioral intention to use, attitude toward use and actual use in e-teaching. External variables that were considered by the researchers included technological self-efficacy, internet experience, management support and training.

Theoretical Framework

The Technology Acceptance Model (TAM) was used for the theoretical framework applied on the teachers using ICT's in their teaching. It is considered to be the best-known frameworks for the perception of technology acceptance by users. The TAM model dealt with the two psychological factors of teachers that are: subjective norms and computer self-efficacy for the teachers teaching at higher educational institutes in Pakistan. (Zheng et al., 2018) explains how organizational support affects the self-efficacy of the teachers, technological support and perceived benefits of faculty. The results strengthened the hypothesis that organizational support plays a significant role in increasing the e-teaching control and technological assistance of the faculty. Improved e-teaching experiences helped to enrich the self-efficacy and the technical support in turn adding to the professional advantages of using technology.

Methodology

The nature of the study is qualitative. The researchers used structured interview technique to collect the data from the respondents selected purposively. According to Glesne (1999), and Wallen and Fraenkel (2003), qualitative study provides considerate of phenomena or condition to explain the story rather than defining effect and cause. Research tool used for the data collection of the study was structured interview. The interview for the teachers consisted of eight items. All the items were open ended. The purposive sampling technique was selected for the study and 20 teachers from various universities were selected for the interview. Only those teachers were selected who were involved in training subjects through E-learning.

Population of the present study consisted of the respondents from the public teacher training institute and universities of southern Punjab including District Multan, Bahawalpur, Rahim Yar Khan. According to NACTE, there are 268 public and private teacher training institutes in Pakistan and approximately 35 public teacher training institutes in Punjab. There are 7 public teacher training institutes in southern Punjab. Teacher training programs are being currently conducted in the public sector Universities at large; therefore, the researchers selected these four universities, the Islamia University of Bahawalpur, Govt. Sadiq College for Women University Bahawalpur, Bahau-din Zakariya University Multan, Khwaja Farid University of Rahim Yar Khan Campus. Sample of the study was selected from the public universities of district Bahawalpur, Multan and Rahim Yar Khan. Purposive sampling technique was used to select the group of the study. Purposive sampling is the mechanism by which a sample is strategically assembled to ensure that the required subgroups are included in the sample (Creswell, 2012). Sample consisted of the teachers (male and female) teaching in the teacher training institutes of southern Punjab (Pakistan). 20 teachers from various universities were selected for the interview. Under the selected ranges of specific demographical variables, the respondents were selected to make the survey sample homogeneous. Demographical variables that were considered for this specific study included the age, the gender, the educational level, the internet experience and the previous experience of LMS.

The interview was arranged with the prior permission of the faculty members at universities. The interviews were taped with the allowance of the respondents. The researchers personally visited the faculty members of higher educational institutions/departments of Education and the Educational teacher training. The respondents of this interview are the faculty members who are teaching to the prospective teachers in four institutions of higher education in the southern Punjab (Pakistan).

The educational institution from where the interviews were conducted. Five respondents were from the Islamia University of Bahawalpur, four respondents were from the Bahuadin Zakariya University Multan, four were from the Government Sadiq College Women University Bahawalpur and five respondents were from The Khwaja Farid Campus Rahim Yar Female participants were twelve (12) and male participants were six (6). So, the female who participated in the research were 66.7 percent while percentage of male who participated in this interview was 33.3 percent. The participants of the interview were categorized according to their prior teaching experience that 27.8% of participants has less than 05 years of teaching experience. 61.1 percent

of the participant's had 5-15 years of teaching experience and only 11.1 percent of the participants had 16-25 years of teaching experience. 100 percent of the participants had internet experience. The LMS experience of the participants was also 100 percent. As all the participants had already teaching through the LMS. The prior internet experience of the participants was 100 percent so it is important to know their level of IT expertise to which extent, they are expert with IT. 77.8 percent of the participant had average IT expertise whereas; only 22.2 percent of the participants were expert in IT.

Results

Data gathered through interviews was analyzed using thematic analysis. Thematic analysis, according to Alhojailan (2012), is a type of qualitative analysis used to uncover major themes and ideas in textual material. It is a technique for systematically identifying, organizing, and revealing meaning patterns (themes) in a dataset (Braun & Clarke, 2012). The researcher identified recurring ideas/themes and prioritized them. Themes are concepts that appear in interview transcripts repeatedly.

Theme 1: Teacher's perception about E-Teaching

Opinion of teachers about teaching experience through e-teaching was taken. In the light of the opinions taken from teachers it was delineated that teachers had a good experience of teaching by the use of e-teaching. Considering the opinions of respondents, it was seen that 66.67 percent of the respondent's experience with e-teaching was good whereas, only 16.66 percent respondents show a very good experience of teaching through e-teaching. 16.66 percent of the respondents also underwent the difficult experiences about teaching through e-teaching.

Used of LMS in E teaching

When Opinions from the teachers' was delineated about using LMS during COVID-19, it was observed that 90 percent teachers agreed with the statement that LMS is good for teaching learning process during a pandemic situation whereas only 10 percent preferred physical lectures.

E-Teaching Provide Complete Package of Teaching and Training

Opinion of teachers about LMS providing complete package of teaching and learning was recorded it was witnessed that 36.36 percent teachers considered the e-teaching a complete package whereas, 36.36 percent teachers believed that e-teaching is not a complete package of teaching and training. 27.27 percent of the total respondents believed that this software is near to completion.

Theme 2: Teacher experience using TAM towards its usability

Considering the teachers opinion about the usability of TAM, it was found that 36.36 percent of the participants think that TAM usability is above average whereas, 63.63 percent respondents think that TAM usability is average.

Theme 3: Suggestion for making Teaching Learning more effective through e-teaching

In the opinion of the teachers about making teaching learning more effective through e-teaching a variety of suggestions were obtained. A number of respondents think that the software interface must include features like simplicity and efficiency. User interface of e-teaching must be interactive and flexible to use. Majority of the respondents were in the favor of the proper training for teachers as well as; students to make the teaching learning through e-teaching more effective. In the light of these suggestions, it was concluded that 80 percent of them emphasized on the proper training provided by the organization whereas, 20 percent emphasized on the introduction of more features to e-teaching interface.

Learning Objective Achieved more effectively through TAM

Depending on the Opinions of the teachers about learning objectives achieved more effectively through TAM this can be categorized into two levels: a) learning objectives achieved at students' end and b) teaching objectives' achievement at Teacher end. In the light of the opinion taken from the teachers, it was observed that 72.72 percent of the respondents thought that learning objectives at the student's end cannot be effectively achieved by teaching through TAM. 18.18 percent of the teachers think that learning objectives can be effectively achieved by teaching through TAM whereas, 10 percent were uncertain about the effective achievement of learning objective through

TAM. Considering the achievement of teaching objective at teacher's end; 63.63 percent of the teachers think that teaching objectives can be effectively achieved by teaching through TAM whereas; 36.36 percent were in favor that the teaching objectives cannot be achieved effectively through TAM.

Theme 4: Problems encountered while using e-teaching

A bunch of problems were highlighted by the teachers while using e-teaching. In the light of the opinions from teachers many problems were encountered by them. Major problems as highlighted by the 70 percent of the respondents were internet, poor connectivity, issues during uploading and downloading of materials. 20 percent of the respondents highlighted the issue of management of large class, conducting the assessment and minimal interest of students. Only 10 percent indicated that they faced no problem while use of e-teaching.

Use of LMS in future

Opinion of the teachers regarding use of e-teaching in future recorded 100 percent of them were in favor of use of e-teaching in future. Because 21st century is the century of IT and it is the need of the day to learn the IT and prospective teachers must be equipped with the fifth skill of communication along with other four skills. Knowledge of IT is considered to be the fifth skill of communication. All the teachers agreed with the statement and suggested use of e-teaching in future. However, few of them suggested only 10% that the course content during training of prospective teacher should be taught through e-teaching in conventional teaching so that the prospective teachers could be brought up to mark of 21st century skill.

Attitude of the teachers towards e-teaching seemed affected by the computer self-efficacy and internet experiences. When a learner is relaxed and can use an e-learning system, their potential use of this system can be improved. In addition, literature notes that society will have a beneficial and harmful part in forecasting a system acceptance and rejection.

Social influence seemed a significant element determined by subjective norms; that affect the adoption and future use of a technology in the higher educational institutes of Pakistan. Furthermore, the adoption and fulfillment of e-teaching often considered to be a subject of concerns related to some organizational determinants. Some of the organizational factors can be

connected to the implementation of technology in higher education such as; training and management support. Higher educational institutes must arrange frequent trainings on LMS for enhancing their teacher's skills. Teacher training institutes must build expertise in prospective teachers for the use of off-line as well as; online e-resources and even in blended learning.

Discussion

This study evaluated the e-teaching, perception of university teachers during pandemic in higher educational institutes of Pakistan. The higher educational institutions were closed due to spread of COVID-19, due to which the HEI's teachers used e teaching tools to teach the learners. The researchers tried to identify teacher's perception about the implementation of technology assessment model in e-teaching and identification of the problems faced by the teachers while switching to e-teaching. The requirements of the e-teaching system in universities have already been explained in some studies. The challenges of e teaching resources in institutions and faculty limited in developing countries (Afzal, et al. 2020). (Abid, et al. 2021) research found the gap that university teachers face many challenges while used e-teaching. These encounters came into being due to lack of e teaching experiences, technology resources and management, and culture and psychological.

The finding of Solikhah (2020) explored that during COVID-19 e-teaching is not very effective because teachers did not seemed to be well aware of technology resources. Another study identified that teachers are not interested and motivated because of their unexpected shift of digitalization (Nayak & Kulal, 2020). One study supported that e teaching can not be a replant to the social and academic needs of teachers. Furthermore Ozdamli and Uzunboylu 2011 highlighted that e teaching is not alternative of physical teaching, teachers can recognize the non-verbal linguistic of students in physical classes. Aliyyah et al., 2020 highlights that teachers have responsibilities and tasks cannot be easily shifted from physical to E- teaching, E-teaching experiences not been applied before. This current study explore that the mode of teaching learning process in Higher educational institutions in Pakistan seemed to transfer due to the impact of COVID. The HEIs of Pakistan need to revisit their policies and structures of training. Innovation seemed to require in teacher training centers and the prospective teacher need to modernize their strategies.

Conclusion

In the light of findings, it may be concluded that the mode of teaching learning process in Higher educational institutions in Pakistan seemed to transfer due to the impact of COVID. The HEIs of Pakistan need to revisit their policies and structures of training. Innovation seemed to require in teacher training centers and the prospective teacher need to modernize their strategies. This would help the prospective teachers to learn information communicative technologies (ICTs) and use them in the classes. There is an urgency required to be implemented among HEIs to incorporate e-learning and use of technology is required to be the most important factor included in the teacher training sector. This course can help teaching learning process a lot in case if any calamity occurs in future the process of teaching learning would remain in effective.

Teachers are important figures in supporting high-quality education, and not a single educational reform is expected to work without their strong engagement and ownership. A teacher is expected to integrate e-teaching with conventional learning and be proficient in web-based education. Teachers must adapt their attitude to embrace a new model of teaching from instructions to education facilitation and administration rather than information dissemination.

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