

The Relationship between Organizational Climate and Technology Acceptance at University Level

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Abstract

The advent of modern technology has augmented the need for its integration in educational processes. The organizational climate plays a significant role in the acceptance and use of technology by academia. This study was conducted to investigate technology acceptance by university teachers and to explore the relationship between organizational climate and technology acceptance. A mixed-method approach using the sequential explanatory design was employed for data collection. The population of the study was the faculty members from different departments of the universities operating on dual-mode education. A sample of 300 teachers was selected by proportionate stratified random sampling technique and 20 teachers from survey participants were selected for the interviews. The validity of the tool was ensured through feedback provided by experts and the reliability of each variable was checked through Cronbach's alpha. The researcher himself visited the universities for the collection of quantitative as well as qualitative data. It was concluded that male teachers were significantly better in technology acceptance than their female counterparts; a significant strong positive relationship was observed between conducive organizational climate and technology acceptance; a significant weak but positive relationship was found between non-conducive organizational climate and technology acceptance; a significant correlation was found between sub-components of organizational climate and technology acceptance. It is recommended that the female teachers must be imparted training regarding effective use of educational technology for teaching; a conducive climate at HEIs must be maintained to enhance acceptance and use of technology. Annual performance appraisal of teachers must include criteria for acceptance and use of technology by the academia.

Key Words: Educational Technology, Organizational Climate, Higher Education, Blended Learning, Technology.

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Introduction

Technology has rapidly transformed the way we live and collaborate. As far as acceptance of technology is concerned, the education sector is lagging. Education is the only way to transform the world in a positive direction. Modern technology can help to reduce the obstacles to the provision of quality education around the globe (Nikolopoulou, Gialamas, & Lavidas, 2020). It has been proved through various studies that the attitudes of teachers towards technology can influence their acceptance and use of novel technology for teaching (Njiku, Maniraho, & Mutarutinya, 2019; Schere, Tondeur, Siddiq & Baran, 2018).

Stephen (2020) argued that information technology is very important in transforming education and teacher training in 21st century. The higher education sector has developed into multifaceted dimensions and universities need to establish their responsibility of being reflective and adaptive to the emerging needs of the learners. Teaching technologies have modified the traditional modes of education at the institutes of higher learning, as it provide equal opportunities for teachers as well as learners to furnish themselves with modern skills. The objective should not be defined by the business model, but it must be depicted through the vision of a learning society (Laurillard, 2013). A huge capital has been invested in technology for higher education; however, the utmost use of technology by faculty members is not guaranteed. That is why numerous studies were conducted on the implementation of technology by university faculty within their instruction (Hoffman, 2013). In this venture, organizational climate plays a pertinent role in the acceptance and use of educational technology by university academia.

Organizational climate is the collective perceptions associated with procedures, practices, and policies that are experienced by employees and attached to their attitudes and behaviors as they observe and practice by getting rewarded (Schneider, Ehrhart & Macey, 2011). The organizational climate can be comprised of several components i.e. structure, size, system complications, leadership style, and directions for the goals (Desrochers & Kirshstein, 2014).

Statement of Problem

Owing to the technological revolution, higher education has evolved globally. Hence, higher education is required to be transformed in-line with the emerging needs of the modern era. However, studies revealed that university teachers are not integrating modern technology to their utmost potentials for teaching purposes (Ellahi & Zaka, 2014). Similarly, the climate of higher education institutes is also not conducive for the successful dissemination of education at dual-mode universities (Saifi, 2016). It has been confirmed through different researches that appropriate organizational climate can effectively influence the implementation of

the change (Elly, 1999). Hence, it augmented the need to explore the technology acceptance of university teachers and the relationship between the organizational climate and technology acceptance of university teachers.

Objectives of the Study

Following are the objectives of this research:-

1. To explore the technology acceptance of teachers at the university level.
2. To check the relationship between organizational climate and technology acceptance of university teachers.
3. To investigate the relationship between the sub-components of organizational climate and technology acceptance of university teachers.

Research Questions

The following questions paved the path for this research:-

1. To what extent university teachers have acceptance of the technology?
2. How much organizational climate correlates with technology acceptance of university teachers?
3. To what extent the sub-components of organizational climate correlate with the technology acceptance of university teachers?

Research Hypothesis

Following are the hypothesis of research:-

- H₁** There is a significant acceptance of technology by university teachers.
- H₂** There is a significant relationship between organizational climate and technology acceptance of university teachers.
- H₃** .There is a significant relationship between the sub-components of the organizational climate and the technology acceptance of university teachers.

Significance of Study

This research is a unique approach to the problem because it focuses specifically on the organizational climate associated with the technology acceptance at university level. Research findings would be valuable not only for academics, public and private universities but also to the country at large. Moreover, it would be very supportive for the individuals as well as the educational institutions to review their policies and revamp their organizational climate.

Literature Review

Sharma (2018) highlighted that use of technology determines the fundamental objectives of teaching in behavioral aspects. Further, emphasizing the pertinent role of technology, he described that it generates certain conditions. Educational technology is often expected as the .hardware only; although it is in fact, the most important one is the .software; that is, material and requisite procedures that determine specific ways the hardware is used for the purpose (Sharma, 2018).

Lewis, Fretwell, Ryan, and Parham, (2013) suggested few emerging technologies that are to be used in higher education i.e. Course Management System i.e. Blackboard, Moodle, LinkedIn, Facebook, and Twitter, at the moment are being well-thought-out novel .communication modes for effective delivery of instruction in the classrooms (Phillips & Chapman, 2012). It is expected that competent and greater articulating teachers are successful in acceptance and use of modern technology, as much as they will emphasize upon inclusion of these aspects as a regular component of the course training and experiences of the classroom (Lewis et. all, 2013).

Lidtke (2019) identified few impediments in the implementation and use of .technology by teachers: (a) insufficient proof for effective use of the media; (b) resist the change; (c) need for specific skills or training for effective use of technology; (d) in-suffice software, hardware, and the courseware; (e) necessary changes to use the technology; and (f) necessary preparation and time needed while using technology in teaching. Yoo, Haung, and Lee (2012) in their research, identified a strong relationship between organizational climate and technology acceptance of teachers.

Holdan and Rada (2011) stated that the technology efficacy of teachers may affect their acceptance and use of technology. Panda and Mishra (2007) highlighted a few pertinent barriers in the adoption of e-learning i.e. accessibility of the internet, training issues, and necessary policy guidelines from institutions regarding the design and planning for online learning.

Educational Technology

Distance learning is gaining recognition in the educational milieu as the online teaching-learning has gained a lot of momentum as students need an alternative for brick and mortar face-to-face sitting and learning. Time is a major barrier for learners of the day who have zeal and yearn for education to maintain pace with emerging needs (Schneiderheinze, 2011). Mass Open Online Courses (MOOCs), Learning Management Systems (LMS), Cloud computing applications, and other media are effective communication tools for the 21st century academia (Salas, 2016).

World Wide Web. It is a hypertext markup language system that uses effective means

of transport mechanism (Akir, 2006). It is network-based multiple locations that allow users to share protocols that are common for graphic displays, texts, videos and audios, etc. internet explorer, Firefox, Google Chrome, and Safari (Ko & Rossen, 2017).

Learning Management System. The LMSs in higher education are becoming primary gears for the dissemination of education through distance learning in colleges and institutions of higher education all over the world. These tools are being employed to introduce a diversified combination of blended or completely on-line teaching that may be mediated by a tutor. The learning management systems play a significant role in universities as it is a novel concept for educational processes to discover in assorted settings of education (Akir, 2006). The learning management system is the most frequently accessed system that designs, organizes, and provides access to educational material for students, tutors, and educational administrators (Narwani & Arif, 2008).

Electronic Mail. It is a tool of asynchronous communication that is accepted at a large scale for effective communication in the domain of education (Gasaymeh, 2009). Pertinent advantages of the e-mail are: easy communication between students and tutors anytime; minimizes face-to-face interactions between learners and tutors; allows tutors in sharing any type of announcement to students followed by the surety that those messages have been received and read; and also improves delivery of the learning material (Akir, 2006).

Discussion Bulletin Board. It is a very important mode of exchanging learner specific communication (Akir, 2006). It is a useful software program for sending and receiving messages. It is also termed as discussion forums, electronic bulletin boards, conference areas, web forums, conversation groups, interactive messages, and news groups (Ko & Rossen, 2010).

Audio and Video Conferencing. In the 21st century, this is the most workable solution for the delivery of distance education to correspond with one and other i.e. students and teachers. According to Hu and Wong (2006), the biggest problem with asynchronous tools is that learners and teachers cannot view and hear the gestures and expressions of both teacher and students. Moreover, the audio-video conferencing software allows audio and video communications one-to-one or among the groups e.g. 'Skype', 'Centra' 'Zoom' and 'IVocalize' (Ko & Rossen, 2010).

Wiki. A program that allows copying, creating, and cutting of content on web pages with no specific awareness and understanding about codes of a programming language (Ko & Rossen, 2010). It is a short letter taken from the Hawaiian language, the wiki-wiki, which means very speedy or rapid (Richardson, 2010).

Technology Acceptance

Saifi (2016) articulated that the technology is very significant for the successful accomplishment of the distance education process. Davis (2018) emphasized that

often employees are not willing to adopt novel ideas or technology even if it is considered; it would considerably enhance the performance of the users. Elaborating the adoption of new technology, Davis (2018) suggested that the personnel involved in research practices need to comprehend the reasons for not accepting the new ideas and technology by the employees and why they resist new technology so that system be devised to enhance the acceptability of novel ideas. Few faculty members in the institutions of higher education resist learning and using modern technology (Khalil, 2013).

Aypay (2010) investigated the attitudes of teachers towards Information and Communication Technologies and concluded that experience, motivation factors, demographics, and various methods of teaching influence the use of ICTs and other technology. One of the thrilling results unfolded that computer knowledge of more than 70% of teachers was very less.

Research by Petko (2012) unfolded that teachers do not choose online learning as it is perceived that it would not be easy to use technology. Motaghian, Hassanzadeh, and Moghadam, (2013) concluded the same results about the faculty at the university of technology in Iran. Technology readiness is the motivation of an individual to employ information systems for specific tasks it is intended for (Teo, 2012). In order to ensure the effective implementation of technology, teachers must understand how to connect technology with pedagogy and curriculum. Focusing on the ways and means of teachers for technology use in the instructional practices is of great significance as compared to laying focus for tools that teachers use during their teaching practices (Koehler, Akcaoglu, Mishra, & Rosenberg, 2013).

Unified Theory of Acceptance and Use of Technology

It is a popular framework in the domain of technology acceptance theories and models. Apart from others, it focused to elaborate the user intentions in acceptance and use of information systems and use behaviors. Venkatesh, Morris, and Davis (2003) framed an integrated arrangement to explain the core concepts of acceptance processes. Four key constructs are the basis of this unified theory i.e. effort expectancy, performance expectancy, social influence, and facilitating conditions (Venkatesh et. al., 2003). The behavioral intents are explained in the following paragraphs:-

Performance Expectancy. The extent to which an individual believes that use of a system will increase his/her maximum performance on the job.

Effort Expectancy. It is the degree of ease connected with convenience involved in the use of information systems.

Social Influence. The extent to that one perceives that people around him/her believe that he/she must use the novel technology/systems.

Facilitating Conditions. It is the degree to which an individual believes that requisite technical and organizational infrastructure exists to support the utilization of novel

technology.

UTAUT in Educational Context

In the domain of education, this model was adopted in numerous studies; however, few of them claimed that this model received very little validation in educational contexts (Wong, Teo, & Russo, 2014). Studies conducted by Wong et al., (2013) investigated the level of acceptance among teachers and student teachers with this model. They further identified the experience as a moderating element. Demographics in addition to socioeconomic factors elaborate less consistent results between developed and developing countries (Iqbal & Qureshi, 2012). Arpaci (2015) explored individual creativity in Turkey and Canada as an additional construct of UTAUT. It referred to the extent of early adoption of specific information systems by individuals. The literature on UTAUT revealed that it is a very comprehensive tool for investigation and analysis of technology acceptance by the users (Oye, Iahad, & Rahim, 2014).

Organizational Climate

The organizations in the 21st century are confronted with greater trials than ever before in history. The climate influences every organization without any concern for structure and size. The climate of the organizations is hampered by the increase in the number of changes influencing that organization (Nair, 2006). If the organizations do not manage any change effectively, it may result in a change in behaviors and perceptions of individuals who are running that organization. It may lead to a decline in the level of motivation and satisfaction of employees, decreased revenue, and absence (Gray, 2007). As a term, the climate is linked with the learning of science of meteorology, and particularly, it is aimed to examine, illustrate and compute different physical proportions and distinctiveness of atmosphere for example rain falling, temperature changes, change in season, and so on (Gray, 2007). Researchers defined the organizational climate according to their core concepts and knowledge of climate. Hall and Schneider (1972) argued that the climate of organizations exist in the perceptions of individuals about the specific environment of his/her organization. These perceptions are shaped by those individuals who use objective input of events and character of these organizations as well as traits of the individuals.

Tagiuri (2008) explained the meticulous configurations of lasting features of milieu, social systems, ecology, and cultures make up a climate, as peculiar configurations of individual characteristics turn into a holistic personality. Ahmed (2008) stated that climate term was propounded by organizational scientists i.e. Douglas McGregor and Kurt Lewin and termed it as social climate, organizational climate, etc. The climates of organizations are based on feelings and perceptions of the employees regarding different

procedures, practices, and specific reward systems prevailing in that organization. This term has been elaborated in many ways; however, a broadly acclaimed definition was propounded by Litwin & Stringer. It is a combination of quantifiable aspects of any working climate that can be perceived by individuals, directly or indirectly, who are living and working in that peculiar climate and affect the motivation and attitudes of the individuals (Litwin & Stringer, 1968).

The organizational climate questionnaire developed by Litwin and Stringer remained a spotlight for researches conducted in the past and renowned for frequently adopted scales in gauging the organizational climate (Woodman, 2013). Litwin and Stringer (1968) elaborated that the scale was developed by following motivation theories propounded by McClelland and Atkinson in an organizational environment.

Components of Organizational Climate

Different aspects of climate may be viewed as being core attributes that determine any organization and can also be calculated and controlled (Litwin & Stringer, 1968). They have identified the determinants of organizational climate which are delineated below:-

Structure. It is the feeling that workers have limitations in their group e.g. rules, set of laws, and measures; any specific importance for the 'red-tapism' and following throughout strict guidelines.

Responsibility. The feeling of being one's self supervisor and boss and not having cross-check of decisions taken by the individual; once you have a job to perform it should be clear that it is yours.

Reward. It is the feeling of being satisfied with the job that is accomplished very well; laying emphasis on the rewards instead of punitive actions. It is probable fairness in the policies regarding pay and promotions.

Risk. It is the sense of risk-taking and a challenge faced on-the-job and at the workplace; is there any importance given for undertaking the risks?

Warmth. It is the feeling of good companionship that prevails in the atmosphere of working groups or complexes. Emphasis is laid on being very much liked, as well as having sociable and unceremonious communal groups.

Support. Seeming very helping-hand of the management and co-workers in different cohorts that emphasize the collective support from top to bottom.

Standards. It is the probable significance of the explicit as well as implicit objectives and other benchmarks for the performance. It emphasizes on performing a good job and challenge exhibited through individual and group objectives.

Conflict. A feel that management and workers have a different point of views; the importance is given to resolving the issues openly instead of leveling over or letting them un-noticed.

Identity. It is the sense of ownership to an organization and sentiments that one is an important member of an effective team. This kind of spirit is always emphasized.

So far as the opinion of teachers regarding climate affects their attitudes and behaviors, it appears very realistic to understand that the climate of an organization may be a significant precursor to one's acceptance and use of information systems. In case, workers recognize and understand that organizations have invested considerable effort to execute the technology, an environment would be developed that may influence behaviors of employees by shifting their observations and attitudes within their organizations (Hofmann & Stetzer, 1996). Kozlowski and Hults (1987) explored the association between innovations and organizational climate and concluded that an adequate organizational environment is a significant aspect for the development of novel behavior of employees. Hence, a conducive climate provided by any organization may influence the readiness of employees to accept and use modern technology.

Methodology

It was co-relational research as the objective was to ascertain the relationship between organizational climate and technology acceptance of university teachers. According to Gay, Mills, and Airasian (2012), co-relational research involves the data collection to conclude if, and to what extent a relationship exists between the variables under investigation. The core objective of any co-relational research is to ascertain the associations or to use the existing ones for making predictions.

Research Design

Mixed-method research was embarked upon and the sequential explanatory research design was pursued. Mixed-method research combines the qualitative and quantitative approaches by mixing both the quantitative as well as the qualitative information in one study. The core objective of the mixed-method research is to develop on the strengths and the synergy which persists between these methods of qualitative and quantitative researches to comprehend the phenomena more forcefully (Gay, Mills & Airasian, 2012).

Population

In revamping process of university education, the higher education commission established several private and public sector universities nationwide in Pakistan. At present, a total of one hundred and seventy-one universities are set-up all over the country and out of those, thirteen universities are mandated with the task to launch distance education programs. All teachers involved in teaching in dual-mode programs were the population of this study.

Sample and Sampling

Proportionate stratified random sampling technique was used for the selection of a sample of 300 teachers which were randomly selected by following the table of random numbers. In order to validate the finding of the survey questionnaire, interviews were conducted from 20 outliers who were purposively selected from quantitative survey respondents.

Research Instruments

Quantitative data was collected through five points Likert scale questionnaire and the qualitative information was obtained through semi-structured interviews of participants. Questionnaire items were adopted from different scales, already, used in previous researches. The adopted items were rephrased in line with the specific context and background of the study.

Validity and Reliability

Initially, the questionnaire was comprised of 75 statements. In order to ascertain the validity of the instrument, it was shared with subject experts and their valuable feedback was incorporated. Valuable suggestions and recommendations like re-phrasing of statements and substitution of difficult words were included to make the questionnaire easily understandable. Internal consistency and reliability of the tools were checked through Cronbach's alpha and overall reliability was found as 0.83.

Data Collection and Analysis

A refined questionnaire was distributed to 300 sampled respondents and out of those, 287 questionnaires were received back complete in all respects, and the response rate was found 95%, a few of participants did not respond properly. In order to analyze quantitative data, percentages, arithmetic means, standard deviation, and t-tests were applied through SPSS and a thematic technique of analysis was employed for qualitative data analysis.

Data Analysis

H₁ *There is sufficient acceptance of technology by university teachers.*

Table 1. Cumulative results regarding Technology Acceptance

S No	Indicators	N	SDA	DA	N	A	SA
1	Performance Expectancy	287	18.8	35.5	3.8	9.6	32.3
2	Effort Expectancy	287	31.5	25.0	4.2	12.3	27
3	Social Influence	287	22.6	34.7	3.5	17.7	21.4
4	Facilitating Conditions	287	20.7	32.0	1.2	29.2	16.9
5	Intention to Use	287	33.3	19.6	4.0	17.7	25.0

6	Actual Use	287	19.9	33.7	4.6	25.1	16.8
Overall Percentage			23.4	31.2	4.2	18.6	23.2

Table 1 depicts that 18.8% of participants were strongly disagreed, 35.5% disagreed, 3.8% remained neutral, 9.6% were agreed, and 32.3% were strongly agreed that teaching performance increases with technology. It may be concluded that the majority of participants have disagreed that teaching performance enhances by the use of technology.

31.5% of the participants were strongly disagreed, 25% disagreed, 4.2% remained neutral, 12.3% were agreed, and 27% were strongly agreed that effort is required for teaching with technology. It may be concluded that the majority of participants were agreed that more effort is required for teaching with technology.

22.6% of the participants were strongly disagreed, 34.7% disagreed, 3.5% remained neutral, 17.7% were agreed, and 21.4% were strongly agreed that he/she is socially influenced for the use of technology. It may be concluded that a greater majority of participants disagreed that he/she was socially influenced for use of technology in teaching.

20.7% of respondents were strongly disagreed, 32% have disagreed, 1.2% remained neutral, 29.2% were agreed, and 16.9% were strongly agreed that he/she is facilitated for use of technology. It may be concluded that the majority of participants have agreed that he/she was facilitated for use of technology in teaching.

33.3% of the participants were strongly disagreed, 19.6% disagreed, 4.0% remained neutral, 17.7% were agreed, and 25% were strongly agreed with the statement that he/she intends to use technology in teaching. It may be concluded that the greater majority of respondents had no intentions to use technology in teaching.

19.9% strongly disagree, 33.7% disagreed, 4.6% remained neutral, 25.1% were agreed, and 16.8% strongly agreed that he/she uses technology in teaching. It may be concluded that the greater majority of participants were not using technology in teaching.

It is evident from cumulative results that 23.4% of respondents were strongly disagreed, 31.2% did disagree, 4.2% remained neutral, 18.6% were agreed, and 23.2% were strongly agreed that he/she is using technology. Therefore, it may be concluded that the greater majority of participants were not using technology for teaching.

Table 2. Gender wise t-test results of Participants on Technology Acceptance

Gender	N	Mean	Std. Deviation	Std. Error of Mean	Degree of Freedom	T Value	P-Value
Male	157	3.99	.174	0.013	285	4.362	0.0001
Female	130	3.77	.141	0.012			

Significance Level 0.05

Table 2 depicts that the mean scores of male participants on technology acceptance are higher than female teachers and the t-value (4.362) is also significant at 0.05 level of significance and there is a significant difference between mean scores in favor of male respondents. Therefore, it may be concluded that male teachers were significantly better at using modern technology for teaching.

H₂ *There is a significant relationship between organizational climate and technology acceptance of university teachers.*

In order to explore the strength and level of correlation between organizational climate and technology acceptance, the cases were sorted out to identify the conducive climate and less/non-conductive climate on the basis of mean scores. Out of 287 respondents, 122 had a conducive climate and 165 were having less/non-conductive climate. The relationship of both categories was checked separately in the following paragraphs:-

Table 3. Correlation results between conducive Climate and Technology Acceptance

		Technology Acceptance	Organizational Climate
Technology Acceptance	Pearson Correlation	1	.882
	Sig. (2-tailed)		.003*
	N	122	122
Organizational Climate	Pearson Correlation	.882	1
	Sig. (2-tailed)	.003	
	N	122	122

**Correlation is significant at 0.05 level (2 tailed)*

Table 3 shows that the correlation coefficient (r) equals 0.882, indicating a strong positive association. The P-value is also less than 0.05 and indicates that the coefficient is significant. It may be concluded that there is a significant strong positive correlation between organizational climate and technology acceptance. Therefore alternate hypothesis is accepted that there is a significant relationship between organizational climate and technology acceptance of university teachers.

Table 4. Correlation results between less/non-conductive Climate and Technology Acceptance

		Technology Acceptance	Organizational Climate
Technology Acceptance	Pearson Correlation	1	.225
	Sig. (2-tailed)		.004*
	N	165	165
Organizational Climate	Pearson Correlation	.225	1
	Sig. (2-tailed)	.004	
	N	165	165

**Correlation is significant at 0.05 level (2 tailed)*

Table 4 shows that the correlation coefficient (r) equals 0.225, indicating a weak positive association. The P-value is also less than 0.05 and indicates that the coefficient is significant. It may be concluded that there is a significant but weak correlation between organizational climate and technology acceptance. Therefore, alternate hypothesis is

accepted that there is a significant relationship between organizational climate and technology acceptance of university teachers.

H₃ *There is a significant relationship between different dimensions of organizational climate and technology acceptance of university teachers.*

Table 5. Correlation results for Sub-components of Organizational climate and Technology acceptance

Technology Acceptance		Technology Acceptance
	Pearson Correlation	1
	Sig. (2-tailed)	
	N	287
Structure	Pearson Correlation	-.217*
	Sig. (2-tailed)	.047
	N	287
Responsibility	Pearson Correlation	.472*
	Sig. (2-tailed)	.003
	N	287
Reward	Pearson Correlation	.299*
	Sig. (2-tailed)	.037
	N	287
Risk	Pearson Correlation	.017
	Sig. (2-tailed)	.779
	N	287
Conflict	Pearson Correlation	-.345*
	Sig. (2-tailed)	.014
	N	287
Identity	Pearson Correlation	.761*
	Sig. (2-tailed)	.023
	N	287
Support	Pearson Correlation	-.243*
	Sig. (2-tailed)	.023
	N	287
Standards	Pearson Correlation	-.288*
	Sig. (2-tailed)	.000
	N	287
Warmth	Pearson Correlation	.313*
	Sig. (2-tailed)	.000
	N	287

* Correlation is significant at the 0.05 level (2-tailed)

Table 5 depicts that the correlation coefficient between structure component and technology acceptance (r) equals -0.217, indicating a weak negative association. The P-value is less than 0.05 which indicates that the coefficient is significant. The correlation coefficient between responsibility component and technology acceptance (r) equals 0.472, indicating a moderate positive correlation. The P-value is less than 0.05 which indicates that the coefficient is significant.

The correlation coefficient between the Reward component and technology acceptance (r) equals 0.299, indicating a moderate positive correlation. P-value is less than 0.05 which indicates the coefficient is significantly different. The correlation coefficient between the risk component and technology acceptance (r) equals 0.017, indicating a weak positive correlation. The P-value is also more than 0.05 which indicates that the coefficient is not significant.

The correlation coefficient between Conflict component and technology acceptance (r) equals -0.345, indicating a moderate negative association. The P-value is less than 0.05 which indicates that the coefficient is significant. The correlation coefficient between Identity component and technology acceptance (r) equals 0.761, indicating a strong positive correlation. P-value is also less than 0.05 which indicates that the coefficient is significantly different.

The correlation coefficient between Support component and technology acceptance (r) equals -0.243, indicating a weak negative correlation. The P-value is also less than 0.05 which indicates that the coefficient is significantly different. The correlation coefficient between Standards component and technology acceptance (r) equals -0.288, indicating a moderate negative association. The P-value is less than 0.05 which indicates that the coefficient is significant. The correlation coefficient between Warmth component and technology acceptance (r) equals 0.313, indicating a moderate positive correlation. The P-value is also less than 0.05 which indicates that the coefficient is significant.

It may be concluded that there is a significant relationship between the sub-components of organizational climate and technology acceptance of university teachers. Therefore alternate hypothesis is accepted that sub-components of organizational climate and technology acceptance of university teachers have a significant relationship.

Qualitative Data Analysis

Several techniques and methods for qualitative data analysis are available i.e. content analysis, discourse analysis, thematic analysis, and grounded theory (Brawn & Clarke, 2013). However, the thematic analysis technique is widely used and considered as the most predominant technique for the analysis of qualitative data (Christofi, Nunes & Peng, 2009). The themes mention few of the significant tips for the researched data and identify patterns or extract meanings related to the data sets.

The detailed analysis of the qualitative data is delineated in the following paragraphs:-

Theme: Effect of organizational climate on technology acceptance

The organizational climate is a significant precursor in technology acceptance of the employees in any organization. When workers realize that their organization is putting

forward huge efforts to implement technology, a climate is developed that manipulates the teachers' behavior by changing their perceptions and approaches.

Sub-theme 1: Organizational Structure

One of the respondents commented that “the job descriptions, course design, acknowledgement of good work, respecting self-identity, and acknowledgment of individual efforts are the salient feature of their organizational. Resultantly, appropriate climate leads towards acceptance of creativeness and new tools and equipment” (Respondent 19).

Sub-theme 2: Guidance and support system

Guidance and counseling is an important aspect of teaching processes, hence, friendly atmosphere in university, an environment of caring and trust and peer support are the important components of a healthy climate.

One of the respondents told that “an environment of caring and trust creates a sense of ownership and enhances teachers' satisfaction in adopting the change and implementation of modern technology. However, it is not being maintained by universities at the moment” (Respondent-5).

Sub-theme 3: Technology Acceptance

So as to ensure implementation of modern technology it is pertinent that annual performance appraisal of teachers should include criteria of assessment. Moreover, good initiatives by staff must be acknowledged and technology engaged teaching must be appreciated.

One respondent told that “the annual performance appraisals do not include grading criteria regarding technology implementation, hence teachers least bother about the use of modern technology for teaching” (Respondent-17)

Another participant replied that “specific training for technology-based teaching is not imparted to the teachers; it is one of the major factors for least usage of technology by the teachers” (Respondent-5)

One more respondent told that the accessibility of digital libraries in their department has made it easy for the staff to use the technology for teaching” (Respondent-3).

Another participant told that “teachers use technology if the climate of the university is conducive enough to facilitate and motivate the staff for the use of modern technology. He further added that besides the software and hardware support, intrinsic and extrinsic motivation binds the individuals towards the accomplishment of the organizational goals” (Respondent-11).

Integrated Analysis

Data collected with two different tools was combined and merged by the researcher to deduce the results. The researcher merged both data sets during its interpretation phase. It is a process of analyzing both data sets independently during the findings segment and combining or mixing the both results in analysis or interpretation stage or the discussion stage of data (Cresswell, Vicki & Clark, 2011).

During quantitative data analysis, a significant moderate positive association was observed between organizational climate and technology acceptance. The same was ascertained in qualitative interviews analysis and revealed that a conducive climate has a positive impact on technology acceptance of the academia.

Discussion

This study was launched to investigate the relationship between organizational climate and technology acceptance of university teachers. Research hypotheses were validated with supporting outcomes of the research. Research unfolded few thrilling results: male teachers were significantly good in technology acceptance as compared to their female counterparts and it was in-line with findings of the research accomplished by John (2015), who explored the attitudes of the faculty members towards technology integration during the teaching process. However, it contradicted the findings of Usman, (2018) whose research was about staff members' usage of the ICTs in the University of Khartoum as there was no significant difference observed between male and female participants.

It was concluded that a significant and strong positive relationship was observed between organizational climate and technology acceptance of the university teachers. This was in conformity with findings of a study conducted by Yoo, Haung and Lee (2012) in which a strong correlation was observed between the organizational climate and technology acceptance by the teachers. It was further confirmed that there is a significant relationship between sub-components of the organizational climate and technology acceptance and these findings have also been supported by the earlier researches (Yoo, Haung & Lee, 2012).

Conclusions

The following conclusions were drawn from general picture of analysis-based findings:-

1. Male teachers were significantly better than their female counterparts in technology acceptance.
2. Technology Acceptance by university teachers was found significantly very less.

3. Conducive organizational climate has significantly strong and positive association with technology acceptance of university teachers.
4. Non/less-conducive organizational climate has a significant weak but positive relationship with technology acceptance of university teachers.
5. A significant weak negative correlation was found between Structure, Support, and Standards components of organizational climate and technology acceptance of university teachers. However, a significant moderate and positive correlation was found between Responsibility, Reward, Warmth, Standards components of organizational climate, and technology acceptance.

Recommendations

The following recommendations are offered:-

1. University teachers must focus on acceptance and use of technology for teaching.
2. The management of universities must maintain a conducive climate to enhance the acceptance and use of technology in teaching.
3. The curriculum of teacher training programs must be reviewed and the implementation of modern technology at par with pedagogy must be ensured.
4. Female teachers must be motivated to use technology for teaching at the university level.
5. Customized training focusing on the pedagogical use of modern technology must be imparted to teachers.
6. The universities must emphasize upon acceptance and use of technology of the academia.
7. Annual performance appraisals of teachers must include criteria regarding the implementation of novel technology.

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