The Relationship between Teachers' Belief Systems, Creativity and the Use of Technology-Based English Teaching

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Abstract

This study intends to find out teachers' belief systems, its' relevant factors and teachers' creativity which may influence the use of technology for teaching of English at undergraduate level in Islamabad, Pakistan. The study highlights certain problems faced by teachers under belief system and the relevant factors in their implementation of Information and Communication Technology (ICT) for teaching of English inside classrooms. Data was collected through a survey questionnaire based on Decomposed Theory of Planned Behaviour (DTPB) from 31 ESL teachers teaching at different colleges in the capital of Pakistan [Islamabad] to know their perceptions, opinions and ideas regarding barriers confronted by them in the implementation of technology for teaching English as Second Language (ESL). Data is analysed with the help of SPSS 22. The findings of the study revealed internal and external barriers such as beliefs, attitudes, behaviours, subjective norms, professional development, resources, and cross culturalism faced by teachers for incorporating innovation and creativity in their teaching practices through the use of technology in Pakistan. The study concludes with recommendations and suggestions for further research.

Keywords: Belief Systems, Creativity, English as Second Language, Information and Communication Technology, Subjective Norms

1. INTRODUCTION

Knowledge of a cutting-edge technology is very important for language teachers before getting obsolete (Amin, 2019). This remark highlights the significance of the adoption of technology in teaching on the part of teachers. The modern world has observed a shift in every walk of life including education (Gunuç & Babacan, 2018). There is a lot of focus at present on the development of forums which discuss the use of technology in teaching environments (Katushemererwe & Nerbonne, 2015). However, teachers' beliefs affect the aims and implementation of using technology in their teaching practices (Gilakjani, 2017).

Information and Communication Technology (ICT) pertains to the use of internet and electronic delivery system. Technology tools like projectors, televisions, radios, computers and mobile phones are broadly used in educational contexts (Küçükler & Kodal, 2018) all over the world. Technology can be used in teaching to enhance autonomy, creativity and critical skills. Patston et al. (2018) also highlight the constructivist aspects of teaching through the use of technology. Teachers assign projects to their students to make their learning autonomous, creative and learner-centred, yet

the educators still face a lot of hurdles and barriers to integrate technology in their teaching practices (Nikolopoulou & Gialamas, 2016).

Technological applications through internet connectivity have shown major progress in the teaching and learning of second language (L2) in the present era. The use of computers has enhanced students' involvement in their process of learning English (Rashid et al., 2018). Teachers have also made the use of visual aids and graphics while utilizing technology for the understanding the meaning of texts (Guo et al., 2018) by their learners. Also, teachers have used technology to make their students more excited and enthusiastic in learning a language. Thereof, technology-based teaching has provided a functional approach to the learning of language by its' learners (Macaranas & Juan Rafael, 2018). Despite the promising output of emerging technological applications, there are a number of educational programs running without any use of technology. Majority of the schools in Pakistan cannot integrate technology into their teaching and learning because of different factors (Chohan et al., 2018).

In spite of all the efforts made by the government of Pakistan to integrate technology in educational contexts, teachers are still found to using traditional teaching methods at schools (Rashid, 2017). Although a lot of research about the topic has been conducted abroad, yet there is very little research to be found in Pakistan concerning teachers' beliefs and their impact on the incorporation of technology in teaching of English as L2. Therefore, the research has been done to fill the gap while addressing the following questions: What are teachers' belief systems? What are ESL teachers' beliefs regarding the use of technology for introducing innovation and creativity in English language teaching in Pakistan? What are ESL teachers' perceptions about different factors involved in technology-integrated English language teaching?

2. LITERATURE REVIEW

2.1. Technology-based Teaching

Integration of technology in teaching is an emerging trend in Pakistan (Farid et al., 2015). Studies have shed light on the significance of the role of technology in teaching and learning (Gilakjani, 2017). Many countries have started to encourage their teachers to make technology a part of their teaching based on technological training and its' infrastructures (Watkins, 2014). However, the use of technology is still limited in educational contexts (Chohan et al., 2018) in Pakistan. Previous researches have focused on the factors that affect the use of technology inside their classrooms (Scherer et al., 2019).

Teachers are thought to be sole entities responsible for bringing innovation in their classroom (Coklar & Yurdakhul, 2017). Teachers endorse the utility and benefit of technology in teaching and learning contexts. However, teachers find many challenges while integrating technology into their teaching (Sadaf, 2019) like access to technology, support and training. Additionally, there are other barriers such as attitudes, knowledge, skills and beliefs which also have an impact on the use of technology in teaching contexts. An increasing number of teachers are using computers for teaching in classroom but there are still some teachers who are not capable of using technology in their teaching or they do not need its' integration (Katemba, 2020) because of certain barriers. Teachers who do not have proper access to technology also cannot successfully integrate technology and creativity into language teaching. Singh (2018) opine that teachers

frequently come across the barriers such as professional development and training in using technology inside their classrooms. A teacher who has inadequate training will not be able to integrate technology in a perfect way. Also, lack of confidence on the part of teachers can result in losing class control (Johnson et al., 2016). Teo et al. (2019) say that teachers' beliefs affect their teaching practices.

2.1.1. Innovation and Creativity

Teachers need to make their learners ready for a rapidly changing world to become the part of 21st century development (Ciğerci, 2020). Teachers are thought to include problem solving skills, creativity and critical thinking on the part of learners in their classrooms. To meet this end, teachers need the ability (technical knowledge and skill) to adopt the changing and ever-increasing technology for their teaching practices (Kopcha et al., 2015) and continually innovate their classroom environment.

The use of technology brings a vast number of contemporary changes like a complete utility of technology in teaching inside their classrooms (Leonard et al., 2016). The utility of technology involves integration of blended learning situations, flipped classroom environment, incorporating e-learning or considering the incorporation of a subject using technology (Doe, 2016). These multiple strategies enhance analytical and creative thinking through project based work environment. The use of technology brings collaborative activities which make the learners use curiosity and imagination that results in critical thinking and creativity to promote new ideas in educational contexts (Bedir, 2019). Also, teacher can help learners through such a strategy to venture uncertain territories instead of being afraid to be ridiculed. The teaching paradigm involves constructivist technique for bringing creativity to the classrooms instead of teacher-centred teaching.

Education is facing many challenges at present; educational system insists teachers to include creativity in students and their teaching. However, different negative issues are involved which obstruct pedagogic transformation regarding innovation and creativity (Patston et al., 2018). These include implicit beliefs, attitudes, lack of professional development, culture and unavailability of teachers' training on a broader scale.

2.2. Teachers' Belief System

Beliefs are described as suppositions held by teachers about teaching and learning (Pajares, 1992). Teachers have belief system instead of developing single belief which is made up of different relevant beliefs (Rokeach, 1968). Teachers' belief systems are made up of different but consistent beliefs for teaching (Cho, 2018). Teachers' belief systems influence teachers' teaching practices (Gilakjani & Sabouri, 2017). Belief systems of teachers ensure the ways through which the teachers teach their students to determine the teaching approach of an educational institute.

Researcher such as Ashton (2015) regards beliefs as combination of affective and evaluative components. Teachers' belief systems assist teachers to keep the wants and needs of students in their mind to make them more effective and inclined towards using technology in their teaching (Behroozian & Sadeghoghli, 2017). Teachers' belief systems make the way of teaching for teachers; decide what students should learn, and they are also helpful in measuring the success or failure of an educational approach (Tondeur et al., 2017). Implicit beliefs of teachers are detrimental to technology integration and

creativity in educational contexts (Patson et al., 2018). Teachers cannot incorporate technology in their teaching unless it suits their beliefs (Barrot, 2016).

2.2.1. Attitudes

Teachers' attitudes are considered as an important factor of how teachers feel about the integration of technology in their teaching environments (Islahi & Nasrin, 2019).). Most of the past literature is concerned with the positive attitudes of teachers who consider technology, or its' use to be an important tool for enhancing students learning (Islahi & Nasrin, 2019). Hur et al. (2016) concluded that teachers with positive attitudes are more prone to the use of technology in their teaching practices. Researchers such as Huda et al. (2018) opined that positive attitude of teachers is an indicator of successful implementation of technology in their teaching. Domingo and Gargante (2016) proposed that teachers with positive attitudes are more interested to adopt technology in their classes whereas teachers with negative attitudes were less inclined to implement technology in their teaching practices (Sahin et al., 2016). Teachers' attitudes are a positive indicator for incorporation of technology and creativity in classroom practices (Patson et al., 2018).

2.2.2. Training

Teachers need to possess training for a successful incorporation of technology into their teaching practices. Such trainings are offered as a part of pre service or in service educational programs for teachers because pedagogical or technical knowledge of teachers affect their use of technology (Boulton, 2017). Teachers usually enhance their integration of technology with the help of training experience which they obtain during their service (in service) or before their service (pre-service).

Training is a very significant factor for the implementation of technology for teaching on account of EFL/ESL teacher. Maduabuchi and Emechebe (2016) carried out their study in Nigeria which suggests the importance of training for all teachers to incorporate technology in their teaching. Hechter and Vemrette (2013) conducted their study in Canada which focuses on the importance of training in using technology for the teaching of a language. More than 50% of the participants of their study ascribe lack of training as a barrier to the integration of technology and creativity through constructivist approaches in educational contexts (Patson et al., 2018).

2.2.3. Resources

Resources deal with availability of technology tools i.e. hardware and software. Hechter and Vermette (2013) carried out their research in Canada which points out lack of resources as a very influential factor for the implementation of technology in educational contexts. Batane and Ngwako (2017) propose the usage and availability of technology in their teaching practices. Khan et al. (2012) conducted their research in Bangladesh which opines the lack of resources as an obstruction in the implementation of technology and creativity for language teaching. Research carried out by Khan et al. (2012) also urge the availability of equipment and maintenance of accessories as a need for the fruitful use of technology.

2.2.4. Professional Development

Professional development covers teachers' ability in using innovation in their teaching practices (Zhiyong et al., 2020). Zheng et al (2016) propose lack of knowledge

and insufficient skills to be teachers' concern in using laptops for teaching. Teachers should therefore possess skills and knowledge to have better students' outcomes.

Saxena (2017) also highlights lack of skills and knowledge to be inhibitors for the successful implementation of technology and creativity in teaching scenarios (Patson et al., 2018). The other studies which reflected on the skills and knowledge to be an obstruction on the part of teachers were conducted by Zamani et al. (2016).

2.2.5. Cross -culturalism

Language and culture are mutually dependent. Teaching a language is also teaching a culture (Ali, 2018). Language teaching does not involve teaching accuracy of a language, but it also involves cultural teaching in many ways. It is therefore concluded that teaching culture is integral to language teaching.

Web 2.0 technologies provided a platform for teachers and students collaboration and interaction not only inside a classroom but also outside the classroom. Researchers such as De Wit et al. (2015) think English to be a 'hyper central language' among all societies. US technological and economic imperialism as well as colonialism are thought to be the two major reasons of the spreading of meteoric English. Expansion of trades at international level, and online communication turned English to be a global language (Rao, 2019). Studies revealed that the use of technology into education enhanced students' participation in cultural exchange and flourished their language through real-life communication (Wu et al., 2011). This situation causes meaningful ties between learners to make a good use of the language of their study.

2.2.6. Subjective Norms

Subjective Norm is the social pressure exerted by significant beings from family, colleagues and friends of teachers and learners. Such social norms affect an individual's decision to take part in an activity (Yen & Chang, 2015). Past literature (Bartikowski & Walsh, 2014) claimed subjective norms to be affected by an individual's normative beliefs. Individuals set forth their norms according to theory of planned behaviour (Ajzen, 1988) to act in line with their normative beliefs (Zhang & Ng, 2012). Researchers like Teo (2009) also call normative beliefs as a key factor which influences teachers' intention in using technology. Lack of technology support from policy makers also hinders the use of technology incorporation and creativity into their classrooms (Patson et al., 2018).

There are several theories which validate teachers' beliefs and their impact on the use of technology for teaching English as a L2. However, the present study has the use of Decomposed Theory of Planned Behaviour (DTPB) which is an extension of Ajzen's theory of planned behaviour (TPB). Theory of Planned Behaviour by Ajzen (1988) is very limited, because it confines to teachers' beliefs and their three salient measures such as attitudes, subjective norms and perceived behaviour control. TPB enlightens human action by linking it to three variables: attitudes, subjective norms and behavioural control which are based on beliefs structure such as behavioural beliefs, normative belief and control beliefs.

The present study has the use of DTPB which is used by Chien et al. (2014) in their study. DTPB is an extension of TPB, and it is combination of Theory of Acceptance Model (TAM), and Theory of Planned behavior (TPB). TAM and TPB are combined to decompose theory of planned behaviour to further specify and extend over to internal and external

factors to have an in depth understanding of factors which affect the use of technology in teaching and learning English as L2.
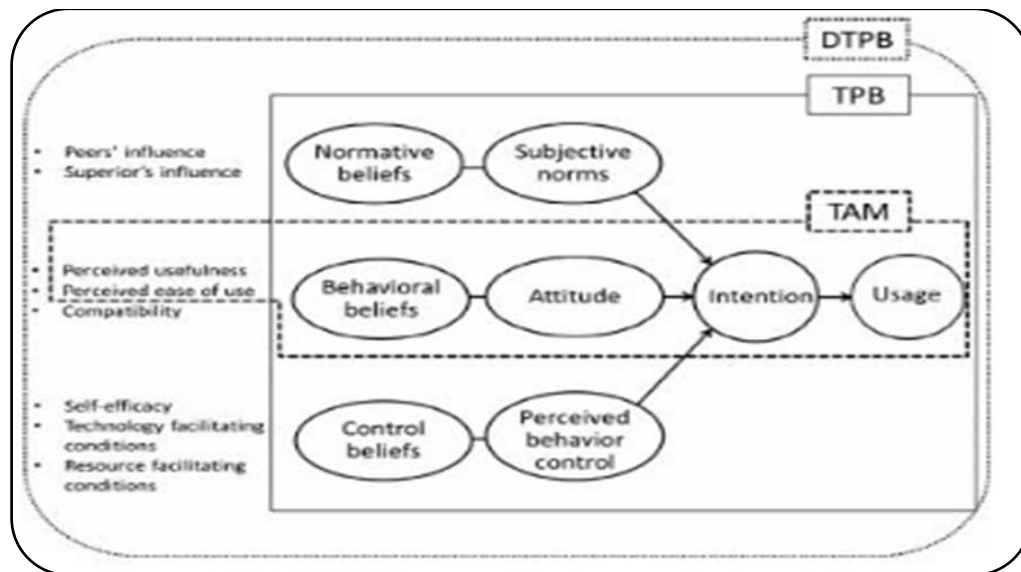

Figure 1. Decomposed Theory of Planned Behaviour.

3. METHODOLOGY

The study employed mixed method research design to address the research questions. The quantitative research tool is adopted from previous studies (Lawrence, 2014; Salleh, 2016) with some amendments made in it to suit to the technology-based ESL teaching in Pakistan. The interview questions are devised with the help of research questions and items used in the questionnaire of the present study. The study used descriptive analysis to present and interpret the findings of the questionnaire while interview questions are given codes and themes. Both quantitative and qualitative data were triangulated. Triangulation of data is deliberately done to achieve the richness of the data (Leung, 2015).

3.1. Research Instruments

The study has the use of both research survey and interview protocol to obtain data from the respondents of the study.

3.1.1. Questionnaire

Quantitative data of the study was collected from 31 participants through a research survey. The questionnaire was adopted from the previous studies (Lawrence, 2014; Salleh, 2016), and was modified to upload it to Google form which is free of cost software, and it allows to include as many participants as possible. The survey contained five points' Likert scales items: ranging from strongly agree [with 5 points score] to strongly disagree [with 1 point score]. The survey was comprised of 56 close-ended questions. The research survey was sent to a panel of five experts for its' content validation who were researchers and university teachers in Pakistan.

The instrument was divided into two parts. Part one of the survey focused on demographic information of the participants while part two confined to the attitudes, beliefs and behaviour of the respondents. The demographic information pertained to the respondents' bio data such as age, gender, qualification, access to computer, and information about the usage of computer for teaching of English in Pakistan. The second part of the questionnaire was concerned with behaviours, attitudes, and beliefs of the respondents in using computers for teaching English as a L2. The part two had three subscales. The first sub scale dealt with attitudes which mainly focused on liking and disliking of the participants towards the use of technology. The second subscale of the second part concerned with behaviours of respondents if they were confident of using technology in teaching English. The third subscales confined to the beliefs of teachers towards the use of technology for teaching English language. The factors had an acceptable Alpha value according to Cronbach reliability test mentioned in Table 1.

Table 1. Cronbach Alpha Values of Different Factors used in the Study

Factors	Cronbach Alpha Values
Attitudes	.73
Behaviour	.76
Beliefs	.78
Cross-culturalism	.74
Professional Development	.79
Resources	.68
Subjective Norms	.70

3.1.2. Interview Protocol

Qualitative data of the study was collected through semi structured interviews. Semi structured interview. The semi structured interviews were devised based on the research questions and items used in the survey of the study. Triangulation of data was done to achieve validity of qualitative data while transcriptions of the interviews were sent to researchers to achieve their agreement about codes for attaining reliability of the qualitative tool.

3.2. Participants

The participants of the present study were 31 professors and lectures teaching English at different public colleges of Islamabad, Pakistan. The survey questionnaires were distributed among the participants with the help of gatekeepers, and data was also collected with the help of those gatekeepers. There were 16 male and 15 female respondents who participated in the study. Three of them had MS/ Mphil degree while twenty six had Masters, one was a PhD holder, and the other one had BS in English.

Moreover, seven respondents willingly participated in the semi structured interviews of the study. The interviewees were the most experienced teachers who frequently used

technology in teaching English as L2. Interview questions were also sent to the respondents with the help of a gatekeeper. The qualitative data was received through social applications like WhatsApp.

3.3. Data Analysis Procedure

After receiving the distributed data, it was edited in SPSS 22 as per information provided by the participants. Descriptive statistics were used for the analysis of quantitative data of the study and its interpretation. Themes and codes were used for the analysis of the qualitative data.

4. FINDINGS

4.1. Teachers Belief System and Technology-Based Language Teaching for Independent and Controlled Learning

Teachers' belief system basically covers teachers' beliefs and relevant factors that affect the use of technology for teaching and learning English. Table 2 reflects on those perceptions and ideas which teachers have under beliefs as the components of belief system in highlighting the role of technology for teaching of English as second language. A mean score of 4.2258 with a standard deviation of .49730 shows that integration of computer is highly influenced by teachers' belief and related factors such as culture. Also, a large of number participants with an average percentage of 67.7 agreed that the use of technology is helpful in motivating students learning of English according to the thinking of teachers.

Table 2. Teachers' Beliefs about the use of Technology for Teaching English.

Item Description	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	Std. Deviation
Use of technology makes my teaching effective	32.3	61.3	6.5	0	0	4.2581	.57548
Using technology can make my teaching easy	38.7	58.1	3.2	0	0	4.3548	.55066
Computer is helpful in teaching English	29	64.5	6.5	0	0	4.2258	.56034
Computers are helpful in motivating ESL students in learning English	22.6	67.7	9.7	0	0	4.1290	.56225
Culture has influence on the learning of a language	25.8	71	3.2	0	0	4.2258	.49730

Qualitative findings of the study also reveal the use of technology to be an essential part of English language teaching and learning. Six out of seven teachers (85.71%) declare the use of technology to be an important component of teaching and learning

English. T1 point out the significance of the use of technology in teaching and learning in these words:

Technology is essential to use in English learning process as scientific terms and research can't become possible without using it. For access, easier way to communicate and for all kinds of solutions related to learning teaching issues.

Likewise, T6 also evinces the importance of the use of technology for motivating students to utilize their thinking to be creative in learning English as under:

Using technology is an important part of teaching and learning process. It creates a better learning environment. The students get a wider exposure to language. The classrooms become student-centred. Nowadays, technology integrated classroom have become much popular for language learning. Learning on their own makes them creative and in this way their creativity skill gets enhance (d).

Similarly, attitudes of participants as another component of teachers' belief system is analysed in table 3 to shed light on the integration of technology in educational contexts. A high mean score of 4.0645 with a standard deviation of .67997 reveals the assistance that the incorporation of technology offers students to control their learning. A numbers of participant with an average percentage of 58.1% are in favour of the integration of technology for the assistance it offers to teachers for teaching language in their classrooms. Therefore, it is found that the attitude of teachers towards the use of technology are very positive and seem to make the integration for the good of both teaching and learning of English teaching.

Table 3. Attitudes as a Component of Teachers' Belief System

Item Description	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	Std. Deviation
I use technology to assess my students' performance	3.2	58.1	29	9.7	0	3.54	.72290
I use technology to prepare my lessons	32.2	51.1	9.7	6.7	0	4.09	.83086
I feel confident of my potentials to use technology in my classes	9.7	41.9	38.7	9.7	0	3.51	.81121
I use technology to diversify my teaching methods	12.9	58.1	12.9	16.1	0	3.67	.90874
The use of technology gives students more control over their learning	25.8	54.8	19.4	0	0	4.06	.67997
The use of computers can help students in overcoming their spelling mistakes	19.4	58.1	12.9	6.5	3.2	3.83	.93441

Qualitative results of the research also point out similar beliefs about the use of technology for teaching and learning English. Technology based teaching involves students learning. Four out seven interviewees (57 %) evince the use of technology for bringing innovation and creativity through collaboration in learning English in these words. T4 presents this viewpoint as under:

Technology in the classroom is essential for increasing student engagement. Use of technology creates innovative learning experience, thus enhance students' critical thinking ability. Technology and the power of digital devices, apps and tools can increase engagement, encourage collaboration, spark innovation, and enhance student learning.

T1 also declare the influence of the use of technology on learners in the following way:

Technology integration empowers learners to be engaged in learning experience inside as well as outside the classroom. It helps them to prepare exercises in productive manner. Learners get engaged in diverse ways of learning tasks.

Subjective Norms is another component of belief system given in table 4 which affects the use of technology in teaching and learning of English. A mean score of 3.225 with a standard deviation of .80456 highlight that subjective norm is very influential in the integration of technology. A large number of participants with an average cumulative percentage of 96.8 also highlight a great impact of subjective norm in the shape parental stance on the incorporation of technology for teaching of English as a L2. On the other hand, a considerably limited number of participants opposed any influence of the supremacy of students' computer knowledge on teachers' incorporation of technology in teaching of English as L2.

Table 4. Subjective Norms as Component of Belief System

Item Description	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	Std. Deviation
I feel threatened because students are more literate than I am	0	6.5	19.4	41.9	32.3	2.00	.89443
Working with computers annoys me	3.2	0	25.8	32.2	38.7	1.96	.98265
Students are distracted from learning while using computer	3.2	12.9	19.4	58.1	6.5	2.48	.92632
I miss interaction with students if I use computers in my teaching	0	16.1	29	38.7	16.1	2.45	.96051
I do not have enough time to use technology	0	16.1	25.8	41.9	16.1	2.41	.95827
Parental stance can influence my use of technology in classrooms	3.2	35.5	41.9	19.4	0	3.22	.80456

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4.2. Teachers Beliefs Concerning Technology-Based Teaching and Learning

Resources are also analysed in table 5 as an effective belief for the integration of technology for teaching English as a L2 by teachers in Pakistan. A mean score of 4.0000 with a standard deviation of .68313 reveals that power cuts are very influential in obstructing the integration of technology in teaching English as a L2. A large number of participants with a percentage of 77.4 agreed that university administration also affect the use of technology for teaching English. Contrarily, a great percentage (58) of participants repudiated the idea of the distraction caused by the use of technology in teaching which points out the use technology as source of language learning rather than a distractor in the process of teaching and learning a language.

Table 5. Resources as a component of teachers' beliefs.

Item Description	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	Std. Deviation
Use of computer in teaching is limited to lab	16.1	48.4	16.1	16.2	3.2	3.5806	1.05749
University administration can affect the use of technology in classrooms	9,7	77.4	9.7	0	3.2	3.9032	.70023
It is important for ESL teachers to know how to teach with the use of technology.	35.5	58.1	6.5	0	0	4.2903	.58842
I would be more willing to use technology in my teaching if I had more training of it.	25.8	48.4	16.1	9.7	0	3.9032	.90755
Technology is not fully integrated because of limited availability of computers.	16.1	58.1	16.1	6.5	3.2	3.7742	.92050
Electric Power cut can also affect the use of technology in the classroom	19.4	64.5	12.9	3.2	0	4.0000	.68313

Qualitative results of the study make the significance of the provision of resources more prominent. Five out seven interviewees (71%) support the availability of technological resources as indicators for the use of technology for teaching English. Availability of resources makes the successful incorporation of technology while the provision of limited resources makes the integration and introduction of innovation and creativity impossible in the teaching and learning of English as L2. T7 professes the availability of resources for the integration of technology in these words:

Appropriate access to technical support, (classroom, informality) availability of infrastructure, (computer labs, software) policies (whether to administer digital homework) and time allocated to incorporate new technologies are major challenges for teachers.

Professional Development is another related factor of belief system to show the impact of on the integration of technology in teaching English as L2. A mean score of 3.1613 with a standard deviation of 1.06761 reflects on the frequency of the use of technology by teachers to highlight the importance of the use of technology in teaching

of language. A good number of participants with an average percentage of 61.3 agreed to the possession of knowledge and skills as professional development to facilitate integration of technology in teaching environments. Also, a number of participants with an average percentage of 77.1 agreed to instruct students to use technology for learning not only reveals the importance of the incorporation of technology into language teaching, but it also shows the significance of the possession of professional knowledge to make a smooth use of technology in teaching English in Pakistan.

Table 6. Resources as a component of teachers' beliefs

Item Description	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	Std. Deviation
I have the knowledge of computer software	6.5	51.6	19.4	22.6	0	3.41	.92283
I instruct my students to use technology for teaching	12.9	77.4	9.7	0	0	4.03	.48193
I often use technology in my classroom	12.9	25.8	25.8	35.5	0	3.16	1.06761
I have enough technical support in using technology	3.2	48.4	19.4	22.6	6.5	3.19	1.04624
I have knowledge and skill to use technology effectively	12.9	61.3	9.7	16.1	0	3.70	.90161

Answers of the respondents of the interviewees also highlight the importance of technological training for the incorporation of technology in teaching and learning English as L2. Four out of seven (57%) respondents in a questions to the obstructions for the use of technology on the part of teachers declares lack of training to be responsible for limited use of technology by the ESL teachers in Pakistan. T1 declares the effects of the unavailability on the use of technology in this way:

Our teachers and students are not trained to use latest technological ways in language learning/ teaching process.

4.3. ESL Teachers' Perceptions about Different Factors involved in Technology Integrated English Language Teaching

Response to the question number 3 of the study is based on the analysis of behaviour in table 7 as a factor for the successful integration of technology. A high mean score of 4.2581 reflects on the use of technology based (online) dictionaries in understanding the textual material in learning a language. Also, a large number of participants with an average percentage of 71 agreed that the use MS Words can help students in overcoming grammatical mistakes. Another reasonable number of participants (58 %) also favoured the use of graphic for the comprehension of the meaning of texts. Therefore, the use of computer in teaching is a source of pleasure, comprehension of meaning and overcoming grammatical errors in teaching and learning environments.

Table 7. Behaviour as a Facilitator for Technology Integrated English Teaching and Learning

Item Description	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	Std. Deviation
I like to use computer in my classes	19.4	32.2	32.2	12.9	3.2	3.5161	1.06053
I prefer to use technology in my teaching	19.4	58.1	19.4	3.2	0	3.9355	.72735
I enjoy using technology in my teaching	19.4	45.2	29	6.5	0	3.7742	.84497
Students learn about their mistakes by using MS Word	12.9	71	16.1	0	0	3.9677	.54674
Use of text messages can improve students' writing skills	16.1	58.1	12.9	12.9	0	3.7742	.88354
Use of images help students in understanding meaning of text	25.8	67.7	6.5	0	0	4.1935	.54279
Use of online dictionaries help to understand text	29	67.7	3.2	0	0	4.2581	.51431

Response to the question number 3 is also based on the analysis of cross-culturalism as another important factor in Table 8. A mean score of 4.1935 shows that culture is very significant in teaching and learning of a language through learners-learners collaboration. A great percentage (67.7) of participant agreed to the fact that communication between learners of different social classes can help learning of English on the part of students. Cross culturalism seems to be effective facilitators in promoting collaborative and meaning based teaching and learning environment for English language teaching and learning.

Table 8. Cross-culturalism as a Facilitator for English Language Teaching and Learning

Item Description	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	Std. Deviation
Use of technology is good for class interaction	16.5	71.0	12.9	0	0	4.03	.54
Learners can help other learners in learning English	25.8	67.7	6.5	0	0	4.19	.54
Interaction with native speakers can be helpful in learning English	51.6	41.9	6.5	0	0	4.45	.62
Communication between learners of different social classes can improve language learning	22.6	67.7	9.7	0	0	4.12	.56
Use of technology makes interaction between geographically dispersed learners possible	67.7	6.5	3.2	0	0	4.09	.65

5. DISCUSSION

This study focusses on teachers' belief system and its' relevant factors for the implementation of technology for teaching of English. The findings of the study show participants' awareness of the importance of the use of technology and its related applications for teaching English as L2. The responses of the respondents shed light on the positive attitude of the teachers towards the use of technology in their teaching. Participants are aware of the effectiveness of the implementation of technology for communication, collaboration and interaction between learners and teachers yet there is no frequent use of technology on the part of teachers in their teaching practices. The qualitative results of the study also revealed the incorporation to bring innovation and creativity in the teaching and learning of student through enhancing collaboration, independence and intellectual curiosity. The findings of the study are similar to the study by researchers (Guo et al., 2018) who favour the use of graphics for the comprehension of a language. Technology-based language teaching provides learner-centred educational methods and has functional approach to knowledge (Macaranas & Juan Rafael, 2018; Bedir, 2019) which promotes problem solving and creativity among learners while using technology in language classrooms, but it is teachers who can make the integration of technology effective in educational contexts (Islahi & Nasrin, 2019). Teachers are termed as the active agents who know what should come inside the classrooms.

Academic innovation can only be implemented when teachers are willing to do it (Coklar & Yurdakhul, 2017). Significant changes of methodologies in relation to technology have already been made throughout the world so teachers should realize the importance of the integration of technology in their teaching practices (DeCoito, 2018). It is time to make teaching more communicative, dynamic and leaner-centred for attaining critical thinking and creativity among students through the integration of technology in L2 teaching environments. The present study is in line with the previous literature which focuses on the obstruction to the integration of technology because of teachers' beliefs (Barrot, 2016). In order to make technology a part of language teaching, further investigations aiming at teachers' use of technology for academic and educational purposes need to be conducted in different teaching perspectives and contexts.

The present study has highlighted some factors which impede the use of technology in teaching and learning context in Pakistan. The study is in line with the past research (Chohan et al., 2018) which exposes different factors that impact the use of technology in teaching practices. Resource is also a major factor beside teachers' belief in using technology for teaching and learning English as L2. School administrators should look into the matter of the lack of resources and address the problem for changing beliefs and attitudes of teachers in making an effective use of technology in teaching environments. Saxena (2017) considers negative behaviour towards technology integrated teaching of English as an outcome of the lack of skill and knowledge on the part of teachers. Similarly, technology can be incorporated in to teaching of English with the inclusion of the element of cross-culturalism. Resources for online communities can be provided through wikis which provides students collaborative and critical learning environment through creating content and sharing information across time zones and cultures. The findings of the study are similar to Kopcha et al (2015) and Patson et al (2018) who pointed out lack of technology skills, shortage of resources, unavailability of teachers' training and improper cultural use inhibit not only integration of technology on the part of teachers but they are also detrimental to establishing creativity through limited use of technology on the part of both teachers and learners in their teaching and learning of English.

6. CONCLUSION & RECOMMENDATION

The present study probes into the elements which obstruct the integration of technology in teaching and learning of English with an ESL background. There are a number of factors which are discussed in the present study to integrate technology into teaching and learning environment. Limited or no use of technology obstructs the introduction of critical thinking, use of imagination and innovation in teaching and learning of English as L2. Teachers' belief is the most effective in integrating technology into teaching English language. Teachers' attitudes are generally very positive towards the use of technology in the present study. However, they are not very encouraging because of the unavailability of computer tools in teaching and learning environments in Pakistan. Teachers cannot utilize technology into teaching unless it suits their pedagogical beliefs (Barrot, 2016). Future comprehensive researches on technology based teaching in ESL context should be conducted to get a better understanding of the acceptance of the new paradigm on the part of educators by drawing attention of stake holders for practical measures in this regard.

Lack of knowledge and skill can influence the successful integration of technology into teaching of English and the acceptance of the available technology in teaching practice (Singh, 2018). Teachers are more willing to adopt technology and introduce creativity thought it if they have the desired skills and knowledge of the utility of technology. Moreover, teachers' attitudes and beliefs also have an effect on their incorporation of technology and behaviour of technology into teaching practices. Integration of technology into teaching of English needs a careful planning for practical measures. Teachers need pedagogical training and coaching for designing technology based teaching activities and practical incorporation of technology in teaching practices of English language. Training, workshops and sessions should be held at institute and department level with a focus on teaching technology integration techniques to the teachers to assist them in adopting modern teaching paradigms of English teaching in educational settings though the professional development of the educators. There should be some collaboration between workplace professionals and experts about the need of some authentic theory to be practiced in teaching and learning environments based on innovations and creativity for better learning outcomes and development of L2 teaching and learning.

Teachers' beliefs and their influence on the integration of technology in teaching practices is not a focused area of research in the present context. Very little investigations have been done on the use of technology in teaching of English in Pakistan. Future empirical researches should also be conducted with the introduction of creativity and innovation through incorporation of technology for the establishment of technology based teaching paradigms in the context. Also, future researches aiming at students' needs and requirements for the incorporation of technology in learning English as L2 should be conducted to establish the importance of technology based teaching methodologies for the replacement of contemporary traditional and outdated teaching and learning used by the educators in contemporary teaching environments of Pakistan.

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