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PERCEPTIONS OF ESL LEARNERS TOWARDS THE USE OF DIGITAL TECHNOLOGY IN DEVELOPING LANGUAGE SKILLS: A CASE STUDY IN SOUTHERN PUNJAB

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Abstract
Digital technology has penetrated so rapidly to all walks of human life that it seems a part and parcel of the life of people belonging to any section of the society. In education, digitalized tools and their applications have done wonders. Both the teachers and the learners of all levels resort to digital technology due to the multi-faceted services offered by it. The present study explores the perceptions of ESL learners of undergraduate level at the public sector universities of Southern Punjab, Pakistan regarding their attitude towards the acceptance and the use of digital technology (DT) in developing their language skills. It is a case study of the ESL learners who are enrolled with the public sector universities of the Southern Punjab for pursuing the degree of graduation. Mixed method design has been used where at the initial stage; quantitative data was collected with the instrument of questionnaire .The data collected through quantitative method was analyzed through descriptive analysis by using SPSS and through PLS-SEM for hypotheses test and the model fit. Later the qualitative method was applied by using interview as the tool of data collection and thematic analysis was done. The findings of the study show that the ESL learners of the public universities of the Southern Punjab have positive attitude towards using digital technology in life. They have positive intention towards adoption and implementation of DT in developing their language skills.

Key Terms: Perceptions, ESL learners, Digital Technology, Language Skills

1. Introduction
Digital Technology has revolutionized the modern day life. There is hardly anybody who is not enjoying the wonderful impacts of this technology directly or indirectly. On this planet, wherever we are, there is a huge shift in the ways of life. In almost all walks of life, there is a shift from manual and traditional to digitalized way of doing things. The world is becoming a digitalized one. We come across with the concepts of e-commerce, e-banking, e-business and e-learning. All such functions are carried with the help of digital technology. In education system technology has brought novel ways and approaches for teaching and learning. Computer-based activities can provide with the rapid availability of materials and that too with a wide range of variety and appropriateness (Tomlison, 2009: Genç lter, 2015). Computer technology has made the things easier for the teachers and learners alike as it has provided ample support in the process of teaching and learning (Bennet, et.al 2000). In the same way mobile-based applications and learning platforms also provide users friendly atmosphere for the teachers and the learners. Digital technology has turned the learning environment from teacher- centered to the learner-centered (Pourhosein Gilakjani, 2014).

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Previous studies show that digital technology has brought drastic changes in the classroom atmosphere (Drayton, et.al. 2010; Lock, 2012). There are changes in the approach of the learners as they find multiple resources available to them round the clock through technology. The rapid extensions and evolution in the digital tools have opened up new avenues for the English language learners and the teachers (Elwood, J.& MacLean,G. 2009). English maintains the status of second language in Pakistan. It is given significant importance partly because it is used as the official language and partly as it enjoys a prestigious place in the world as an international language. That is why English is taught up to graduation level as a compulsory subject in the educational institutions of Pakistan. English is given proper space in curricula and its teaching and learning as a second language in Pakistan is a vital subject for the researchers. Digital technology with a variety of material and extendable association between the teachers and the learners has offered facilitating role in English language learning and teaching.

2. Background of the Study

The integration of digital technology with the education system has provided extended scope to the teaching and learning system. It has changed the educational atmosphere throughout the world. The effectiveness of digital tools offers great services for the language learners and teachers as well because these tools possess and provide many tasks regarding the aspects of language. English as a second language has prime importance in the National Curriculum of Pakistan. The management of any institution in Pakistan is found wary of its teaching and learning. Bull and Ma (2001) suggest that such tools and applications of digital technology can provide multiple resources for the learners of language. The selection and utilization of the materials obtained from technology can be very fruitful for such learners (Clements & Sarama, 2003).

With the present advancement of technology, methods of teaching and learning language have changed to a great extent (Solanki & Shyamlee1, 2012; Pourhosein Gilakjani, 2017). It encourages the learners for cooperative learning as well. English as a language has different linguistic aspects like grammar, vocabulary, pronunciation and the other minor aspects related to syntax, semantics, morphology, phonetics and phonology. Digital technology offers useful applications (Apps) and platforms to serve the learners in all of the pre-mentioned fields of English language. It invites the researcher to probe into the usefulness of DT in the area of developing language skills of the ESL learners particularly enrolled with the public sector universities of the Southern Punjab, Pakistan.

3. Problem Statement

An outburst of technology is observable everywhere. In the recent past a spiraling development has been seen in digital technology across the globe. A tremendous flight has occurred there especially during the last two decades or so. Its impact is observed in almost all walks of life. It is due to this technology that humans have come close to each other whether they are thousands of miles away geographically. The world is shifting to paperless work with the latest access of digital technology. This radical evolution of technology has brought significant changes in education system. It can provide a variety of authentic material to the teachers, learners and the researchers almost free of any cost. It contains rich corpora and can provide real-time feedback. Earlier researchers have studied the impact of digital technology in other fields of life (Can Aran & Senemoğlu, 2014) along with its role in the field of education (Karaman & Kurfallı, 2008; Borich, 2014).

The association and implementation of digital technology with the education system has introduced new methods of teaching and learning (Lynch & Redpath, 2012). The educationists are

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on the look out to find some new and digitalized ways of teaching and learning that can replace the old and outdated methods. The earlier studies have observed the integration of digital technology in Mathematics (Pierce, 1998; Mann, Shakeshaft, Becker, & Kottkamp, 1999), banking (Sia et al., 2016) and business (Verhoef et al., 2021). In the same way there have been studies to observe its impacts generally in education system (Costley, 2014; Tutkun, 2011). In the recent years, especially during the last two decades, there has been intensive use of digital technology in almost every aspect of teaching and learning. Different policies and plans of education system also address the utilization of digital resources in education system (Peeraer & Van Petegem, 2015). There are some Apps and devices like Chatbot and some other communication platforms which provide real-time communicative responses for the language learners and the teachers (Bender et al. 2021). Chabot can engage the language learners in live interactive discussions with the other speakers and provides text based responses as well (Guo et al. 2022). It shows that there are possibilities to utilize the digital tools for better and modern teaching and learning of English language especially in the context of Pakistan.

The public sector universities of Southern Punjab, Pakistan, enroll thousands of students for graduation in different disciplines and the students have to attend English language classes as well. As for the ESL learners of Pakistan, English has been declared a compulsory paper up to graduation by Higher Education Commission (HEC) of Pakistan; the universities make a variety of arrangements like audio visual aids and other digital materials for the uplift of the teaching and learning. Along with the face to face classes, there are online and blended method based sessions as well. The teachers and learners are connected with each other and also have access to the material through LMS, Google Meet, Facebook, Moodle, Google Classroom, Zoom Meeting, YouTube, ChatGpt and other AI tools.

English retains the status of second language in Pakistan. The teaching and learning of English as a second language (ESL) is often given priority at almost all levels of education. The Public sector universities of Southern Punjab, Pakistan are striving to provide educational services particularly to the youngsters of this region and generally to the learners from all over the country. The ESL learners and the English teachers of these universities are also using digital technology to get the benefits out of it. They started giving more attention to the utilization of digital tools, different apps and digital platforms especially in the post COVID-19 days as they were forced to do it extensively due to online teaching and learning system. It is important to look into the feedback of the ESL learners to these digital tools and different apps. This study attempts to find the perception of ESL learners towards digital technology with the purpose to see how far it is supportive to them in enhancing and enriching their language skills.

4. Research Objectives

The objectives of the present study are:

(i) To explore how far ESL learners find it easy and useful to adopt digital technology in language learning.

(ii) To analyze the perceptions of ESL learners about adopting digital technology in developing English language skills

(iii) To identify the challenges faced by ESL learners in using digital technology in learning English.

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5. Research Questions

This study attempts to answer the following research questions:

Q1.How far do the ESL leaners find it easy and useful to adopt digital technology in language learning?

Q2. What are the perceptions of ESL learners about adopting digital technology in developing English language skills?

Q3. What challenges do the ESL learners face in the use of digital technology for learning English?

6. Literature Review

Perception

Perception is an important factor of human behavior. It is considered a dynamic cognitive trait which associates a person with his environment (Schacter, Gilbert, & Wegner, 2019). From social and educational perspective, it refers to how a person interprets different events, behaviors and phenomena which can help him shaping his own attitude, behavior and motivation (Ajzen, 1991). Earlier studies show that the perception of the teachers and learners can affect their adaptability, engagement and responses to technological advancements and the other pedagogical practices (Ertmer & Ottenbreit-Leftwich, 2013). Davis (1989) is of the view that the perception of the teachers regarding technology can affect the use of technology in their teaching practices. Perception is considered vital in language learning as the learners tend to interpret and respond to the effectiveness and usability of technology based tools and aids (Sharma & Barrett, 2007).

Perception can be of two major types: (a) positive perception which shows knowledge or response that is related to accepting or supporting some issue (b) negative perception which is about knowledge that causes motivates to reject some idea or action (Nurzeha, S.Q, 2023). Qiong (2017 is of the view that there are some important stages of perception: (i) *Selection*: During this process perception changes environmental stimuli into experiences (ii) *Organization*: in this process things are organized into different categories. Here, information is gathered from outside world and it is put into meaningful patterns. (iii) *Interpretation*: this process of perception development deals with giving some meaning to stimuli.

Digital Technology

Technology has always been changing and evolving over the years. Various digital tools and countless applications and platforms are the proof of it. It the recent past, digital technology has brought a great revolution in almost all walks of life. The use of digital technology in different sectors of society and its multiple services in the field of education have been studied by different researchers. Its role in the field of education has introduced new trends and has offered novel modes of teaching and learning. Technology based learning has offered the students to use digital tools for enhancing their knowledge and enjoy timeless learning atmosphere. These digital tools were not developed for educational purposes only; rather these were the educationists who exploited them for educational purposes (Burden & Atkinson, 2008).The affordances of these tools and devices were not expressed in their basic features but it is their adaptation and the use which has related them to the present utilization (McLoughlin & Lee, 2007).

Digital technology can help the learners in many ways. It has a particular feature to enhance the motivation level of the learners (Cavendish et al., 1997). There are some arguments against the pretentious claims of using digital technology in educational affairs (Cuban, 2001; Oppenheimer, 2003; Reynolds et al., 2003), still the diversity of digital tools and penetrated access of it has benefitted the world in multiple ways. Two studies done in UK claim that digital technology has

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helped in personalized learning, to monitor one's progress and to learn at the desired pace (Sebba et al., 2007; Underwood et al., 2007).It has been observed that technology does not suit to the traditional teacher-centered method where there is limited involvement of the learner (Blikstad-Balas & Klette, 2020). Teacher's lack of competence in using technology also becomes barrier which demands for pre-service and in-service training programs for the teachers (Engen, Giæver, & Mifsud, 2015).

Language Skills

In language learning and teaching, four major skills (reading, writing, speaking and listening) are given special attention and consideration. In the context of second language learning, as is the case with English language in Pakistan, these language skills are given prioritized focus. The use of technology in teaching and learning of language has been observed and is suggested by many researchers (Cahyani and Cahyono, 2012; Maghfira, 2019). Cakici (2016) observed that technology can provide various kinds of teaching material and pedagogical aids to the English language teachers and it can assist both the teachers and the learners. Furthermore, it makes presentation quite easy and there is adequate practice of language which turns it into a learner-centered approach. Technology is considered useful in research, writing and other problem solving matters and can provide healthy support in language learning skills of the students (Kasneci et al. 2023).

Sharif (2012) suggested that integration of all four language skills and the inclusion of interactive language classrooms are seriously required for communicative language teaching. It is also considered that teaching of every language requires some particular technologies (Warschauer, 2000). Technology supported language has also become an attractive subject for the recent research. Zhao (2013) conducted a research to find how far technology possesses potential for enhancing language teaching. Gilakjani(2013) claims that digital technology can bring changes in the methods of teaching language. It is also observed that with the help of digital technology the learners can enhance learning confidence, strengthen their skills, nurture their autonomous learning strategies and heighten their learning attitude (Lai & Kritsonis, 2006).

7. Research Methodology

The present study has employed mixed method approach for data collection and analysis. The sequential explanatory design has been used. Newman & Benz (1998) are of the view that qualitative and quantitative approaches are neither polar opposite nor dichotomous, rather they showcase different ends of a continuum. Creswell & Plano Clark (2007) manifest that mixed method combines the use of both approaches in tandem with the belief that its overall strength would be greater than either the qualitative or the quantitative method. Creswell & Plano Clark (2018) maintain that in case either of these approaches is unable to study the case, the use of mixed approach can better address the issue. They (2018) also assert that mixed method approach can provide richer and in-depth analysis of some complex matter. It helps to avoid any kind of biasedness.

Population and Sample

The ESL learners of undergraduate classes enrolled with the public sector universities of Southern Punjab, Pakistan, are the population of the study. However this study takes 1000 ESL learners of ten public sector universities (100 ESL learners from each university) as the sample of the present

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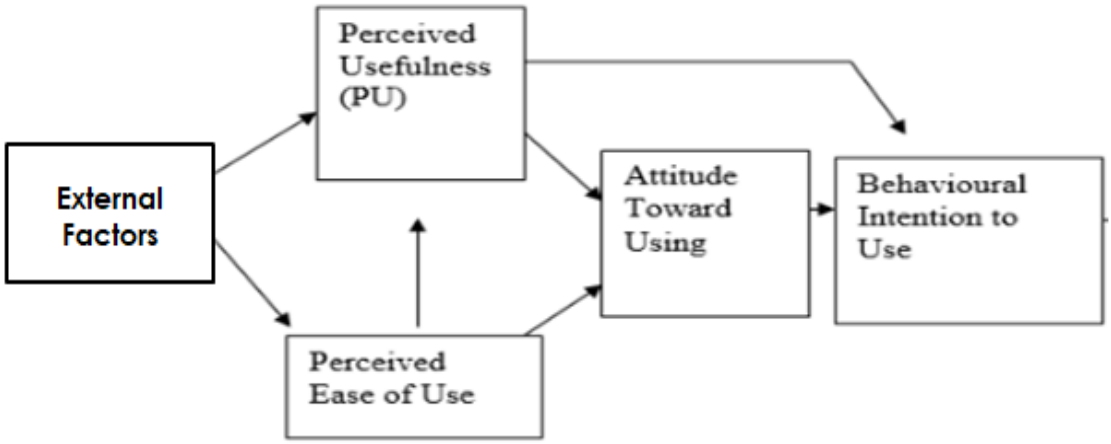
study. These learners belong to different disciplines like English and other disciplines of pure and applied sciences. For this purpose random sampling method was used as it is seen as the gold standard in social science research (O Leary Zina, 2017). The subject of this study are from the first four semesters of B.S English and other disciplines since English as a second language is given the status of a compulsory course up to graduation level(Semester 1 to 4 of B.S. Programs) under the suggestions of Higher Education Commission(HEC) of Pakistan.

Tools of Data Collection

The data has been collected through two tools: questionnaire and interview. At first stage, quantitative method was used and data was collected through questionnaire. This questionnaire comprises of 40 items which are further divided into five sections .Each section deals with one construct of the model used in this study. The questionnaire was adapted from the previous studies (Davis, 1989; Saleh, et.al.2013; Ghani, et, al.2019). This questionnaire was provided to the respondents through Google Form and they responded through digitalized online method. The respondents had to provide their responses on Likert Scale which had five options (Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree). Later on, as a part of qualitative method, the instrument of interview was used. It contained 5 open ended questions which were based on the constructs of the model and the objectives of the study. The questions of the interviews also extended from the findings of the data collected through the earlier quantitative method.

Theoretical Framework

This study adopts Technology Acceptance Model (TAM) by Davis (1989) as model to explore how the perceptions of ESL learners influence their attitude and behavioral intentions to adopt digital technology in language learning. TAM is considered a simple and relevant model which provides robust framework as to how users accept the implementation of technology in educational setting. The extended TAM model has been used here with the four basic constructs (perceived ease of use, perceived usefulness, attitude towards using and behavioral intention to use) and additionally there are four external factors (social norms, cost, technical experience and job relevance).



Technology Acceptance Model (Davis, 1989)

8. Data Collection

(a) Quantitative Data

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At the first stage, data was collected through the instrument of questionnaire having 40 items. The questionnaire was shared with ESL learners of undergraduate classes from English and other disciplines of sciences at ten public sector universities of Southern Punjab, Pakistan. The researcher visited the relevant students at these universities , gave a bit of briefing about the topic , got their WhatsApp numbers and shared Google Form link with them. During this process the researcher kept on contacting the learners and the teachers at these universities to encourage the learners for getting their responses. Google Form was shared with 1000 ESL learners but the researcher could find 977 complete responses from the learners of undergraduate level at ten top ranking universities of the Southern Punjab.

The first part of the questionnaire comprises of the demographic information about ESL learners and the second section contains 40 items.

Table.1 Demographic Information of ESL Learners in the study

Variable	Category	Frequency	Percentage (%)
Gender	Male	331	33.9
	Female	646	66.1
Age	17-19 Years	356	36.4
	20-22 Years	513	52.5
	23-25 Years	104	10.6
	26-28 Years	04	0.4
Discipline/Subject of B.S.	English	522	53.4
	Others	455	46.6
Semester of B.S.	1st	44	4.5
	2nd	193	19.8
	3rd	103	10.5
	4th	637	65.2
Name of University	BZU Multan	137	14.0
	Emerson University Multan	77	7.9
	Women University Multan	118	12.1
	Ghazi University DG Khan	92	9.4
	University of Education Vehari	82	8.4
	COMSATS University Vehari	89	9.1
	The Islamia University of Bahawalpur	84	8.6
	Khawaja Fareed University RY Khan	91	9.3
	Govt Sadiq College Women University Bahawalpur	102	10.4
	NUML Multan	105	10.7

In table.1 demographic information of the respondents has been given. The learners belonged to both male and female gender. The learners who were 977 in total (331 male and 646 female) responded to the questionnaire. Their ages ranged from 17 to 28 years where the majority of the learners (52.5%) fell in the range of 20-22 years of age. As far as discipline was concerned, 522 students were from B.S. English whereas 455 learners belonged to other disciplines. The study was delimited to the first 4 semesters (1st, 2nd, 3rd & 4th) of undergraduate classes and majority of the learners were from semester 4 (65.2%). It was aimed to get 100 responses from one university ideally but in some cases the responses remained a bit shorter of that edge whereas in 4 universities the responses were a bit higher than 100.

Table.2 Cronbach's Alpha Reliability of the Instrument (ESL Learners)

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Sr. No	Sub Scale Name	Code	No. of items	Cronbach's Alpha	
01	Overall Cronbach's Alpha		40	.944	
2	Perceived Ease of Use	PEOU	07	.809	
3	Perceived Usefulness	PU	06	.830	
4	Attitude towards Using	ATU	03	.776	
5	Behavior Intention to Use	BI(R)	04	.902	.753
6		BI(W)	03		.758
7		BI(S)	04		.781
8		BI(L)	04		.761
9	External Factors	EF	09	.817	

As is shown in Table.2, reliability of items has been checked through Cronbach's alpha which has been calculated through software of SPPSS version 26. The questionnaire contained 40 items which have further been categorized into five major sections considering the research objectives and the constructs of the TAM model. The numbers of items in each section have also been given. The Cronbach's alpha value of all 40 items is 0.944 which is highly agreeable and shows great degree of reliability. The Cronbach's alpha value of all five sections and subsections (four subsections of *Behavioral Intention to Use* regarding four language skills shown as reading (R),writing (W),speaking (S) and listening(L) along with BI that stands for *Behavioral Intention to Use*) of the questionnaire remained above the threshold (0.7) as is shown in the last column of table 2. So the values attained through this analysis show that the items used to get the responses of ESL learners about their acceptance of digital technology positively represent and measure the relevant factors of the study. All the items have strong degree of reliability that is way above the threshold.

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Table.3 Descriptive Analysis of Responses from ESL Learners

Sr. No.	Research Qs	Construct	Items	N Statistic	Range Statistic	Mean Statistic	Mode	Std. Deviation Statistic	Variance Statistic
1	Q1. How far do the ESL leaners find it easy and useful to adopt digital technology in language learning? ?	Perceived Ease of Use (PEOU)	PEOU1	977	4	4.01	4	.784	.615
2			PEOU2	977	4	3.95	4	.770	.593
3			PEOU3	977	4	4.06	4	.854	.730
4			PEOU4	977	4	3.98	4	.761	.578
5			PEOU5	977	4	4.03	4	.814	.663
6			PEOU6	977	4	4.03	4	.817	.667
7			PEOU7	977	4	3.94	4	.846	.716
8		Perceived Usefulness (PU)	PU1	977	4	4.01	4	.812	.659
9			PU2	977	4	4.08	4	.784	.614
10			PU3	977	4	4.01	4	.757	.573
11.			PU4	977	4	4.04	4	.779	.607
12			PU5	977	4	4.09	4	.781	.610
13			PU6	977	4	4.03	4	.784	.615
14	Q2. What are the perceptions of ESL learners about adopting digital technology in developing English language skills?	Attitude Toward Using (ATU)	ATU1	977	4	4.01	4	.822	.676
15			ATU2	977	4	4.01	4	.813	.661
16			ATU3	977	4	4.01	4	.810	.656
17		Behavioral Intention to Use(BI)	BI1(R)	977	4	3.92	4	.868	.753
18			BI2(R)	977	4	4.02	4	.816	.666
19			BI3(R)	977	4	3.91	4	.864	.747
20		Reading Skill	BI4(R)	977	4	4.00	4	.781	.610
21		Writing Skill	BI5(W)	977	4	3.98	4	.857	.735
22			BI6(W)	977	4	3.87	4	.856	.733
23			BI7(W)	977	4	3.87	4	.836	.699
24		Speaking Skill	BI8(S)	977	4	3.96	4	.836	.699
25			BI9(S)	977	4	3.93	4	.837	.700
26			BI10(S)	977	4	3.90	4	.880	.774
27			BI11(S)	977	4	3.92	4	.858	.737
28		Listening Skill	BI12(L)	977	4	3.95	4	.811	.658
29			BI13(L)	977	4	3.93	4	.797	.636
30			BI14(L)	977	4	3.93	4	.826	.682
31			BI15(L)	977	4	3.87	4	.854	.729
32	Q3. What challenges do ESL learners face in the use of digital technology for learning English?	External Factors (EF)	EF1	977	4	3.67	4	.907	.823
33			EF2	977	4	3.58	4	1.003	1.005
34			EF3	977	4	3.86	4	.833	.695
35			EF4	977	4	3.82	4	.888	.788
36			EF5	977	4	3.78	4	.905	.819
37			EF6	977	4	3.78	4	.849	.721
38			EF7	977	4	3.94	4	.766	.586
39			EF8	977	4	3.89	4	.779	.608
40			EF9	977	4	4.12	4	.796	.633

Table.3 shows the descriptive analysis of the data collected through ESL learners through the instrument of questionnaire. The data has been categorized into three parts on the bases of research questions of the study. ESL learners who number 977 in total respond to the questionnaire. Likert scale having 5 options ranging from strongly agree to strongly disagree (Strongly agree=5, Agree=4, Neutral=3, Disagree-2 and Strongly Disagree=1) was used. The values in the column of central value, Mean, being more than 3, clearly shows that the respondents were in favor of the statements. The value of Mode which is "4" throughout the column also proves that the respondents mostly opted "Agree" that is represented with the value of "4". The values of standard deviation and variance also show symmetry of data and there is no deviation from the central value of mean. This descriptive analysis of the data collected through

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the instrument of questionnaire shows that the respondents have positive perceptions towards the use of digital technology in developing their language skills.

Table.4 Comparison of Frequencies on Likert Scale (Male-Female ESL Learners)

Male (ESL Learners) N=331											**Female (ESL Learners) N=646**										
Items	**Strongly Disagree**		**Disagree**		**Neutral**		**Agree**		**Strongly Agree**		**Items**	**Strongly Disagree**		**Disagree**		**Neutral**		**Agree**		**Strongly Agree**	
	f	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**		**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**
1	10	3.0	06	1.8	39	11.8	**177**	**53.5**	**099**	**29.9**	1	10	1.5	09	1.4	089	13.8	405	62.7	133	20.6
2	07	2.1	16	4.8	32	9.7	**198**	**59.8**	**078**	**23.6**	2	09	1.4	15	2.3	095	14.7	419	64.9	108	16.7
3	12	3.6	14	4.2	29	8.8	**162**	**48.9**	**114**	**34.4**	3	12	1.9	18	2.8	060	9.3	387	59.9	169	26.2
4	07	2.1	14	4.2	38	11.5	**183**	**55.3**	**089**	**26.9**	4	07	1.1	15	2.3	084	13.0	428	66.3	112	17.3
5	06	1.8	14	4.2	50	15.1	**166**	**50.2**	**095**	**28.7**	5	10	1.5	20	3.1	062	9.6	393	60.8	161	24.9
6	09	2.7	15	4.5	33	10.0	182	55.0	092	27.8	6	10	1.5	15	2.3	072	11.1	385	59.6	164	25.4
7	07	2.1	20	6.0	45	13.6	174	52.6	085	25.7	7	14	2.2	16	2.5	104	16.1	376	58.2	136	21.1
8	11	3.3	16	4.8	27	8.2	188	56.8	089	26.9	8	11	1.7	13	2.0	072	11.1	409	63.3	141	21.8
9	10	3.0	12	3.6	33	10.0	174	52.6	102	30.8	9	08	1.2	10	1.5	056	8.7	407	63.0	165	25.5
10	08	2.4	14	4.2	48	14.5	173	52.3	088	26.6	10	04	0.6	10	1.5	082	12.7	413	63.9	137	21.2
11	04	1.2	15	4.5	35	10.6	177	53.5	100	30.2	11	08	1.2	17	2.6	073	11.3	398	61.6	150	23.2
12	08	2.4	16	4.8	31	9.4	164	49.5	112	33.8	12	05	0.8	13	2.0	061	9.4	401	62.1	166	25.7
13	08	2.4	20	6.0	41	12.4	165	49.8	097	29.3	13	07	1.1	07	1.1	072	11.1	412	63.8	148	22.9
14	11	3.3	16	4.8	40	12.1	172	52.0	092	27.8	14	12	1.9	10	1.5	069	10.7	407	63.0	148	22.9
15	08	2.4	12	3.6	40	12.1	174	52.6	097	29.3	15	09	1.4	17	2.6	087	13.5	381	59.0	152	23.5

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16	08	2.4	17	5.1	39	11.8	179	54.1	088	26.6	16	13	2.0	14	2.2	059	9.1	419	64.9	141	21.8
17	16	4.8	21	6.3	48	14.5	170	51.4	076	23.0	17	11	1.7	19	2.9	080	12.4	402	62.2	134	20.7
18	05	1.5	21	6.3	38	11.5	174	52.6	093	28.1	18	08	1.2	17	2.6	085	13.2	371	57.4	165	25.5
19	09	2.7	24	7.3	46	13.9	173	52.3	079	23.9	19	09	1.4	30	4.6	096	14.9	373	57.7	138	21.4
20	06	1.8	13	3.9	41	12.4	188	56.8	083	25.1	20	08	1.2	18	2.8	081	12.5	399	61.8	140	21.7
21	06	1.8	23	6.9	40	12.1	176	53.2	086	26.0	21	14	2.2	24	3.7	070	10.8	384	59.4	154	23.8
22	07	2.1	23	6.9	47	14.2	180	54.4	074	22.4	22	11	1.7	37	5.7	093	14.4	390	60.4	115	17.8
23	08	2.4	17	5.1	45	13.6	193	58.3	068	20.5	23	11	1.7	33	5.1	102	15.8	388	60.1	112	17.3
24	08	2.4	19	5.7	40	12.1	178	53.8	086	26.0	24	12	1.9	23	3.6	074	11.5	401	62.1	136	21.1
25	06	1.8	25	7.6	42	12.7	172	52.0	086	26.0	25	11	1.7	19	2.9	103	15.9	385	59.6	128	19.8
26	08	2.4	20	6.0	47	14.2	160	48.3	096	29.0	26	12	1.9	33	5.1	106	16.4	371	57.4	124	19.2
27	12	3.6	13	3.9	45	13.6	166	50.2	095	28.7	27	09	1.4	34	5.3	092	14.2	394	61.0	117	18.1
28	11	3.3	20	6.0	45	13.6	177	53.5	078	23.6	28	09	1.4	16	2.5	074	11.5	423	65.5	124	19.2
29	04	1.2	15	4.5	60	18.1	164	49.5	088	26.6	29	11	1.7	17	2.6	103	15.9	403	62.4	112	17.3
30	09	2.7	17	5.1	46	13.9	167	50.5	092	27.8	30	08	1.2	30	4.6	078	12.1	417	64.6	113	17.5
31	06	1.8	16	4.8	53	16.0	175	52.9	081	24.5	31	11	1.7	41	6.3	104	16.1	380	58.8	110	17.0
32	09	2.7	31	9.4	74	22.4	159	48.0	058	17.5	32	14	2.2	63	9.8	125	19.3	372	57.6	72	11.1
33	17	5.1	37	11.2	75	22.7	137	41.4	065	19.6	33	19	2.9	82	12.7	130	20.1	335	51.9	81	12.4
34	06	1.8	26	7.9	56	16.9	171	51.7	072	21.8	34	06	0.9	31	4.8	120	18.6	375	58.0	114	17.6
35	07	2.1	29	8.8	70	21.1	148	44.7	077	23.3	35	09	1.4	42	6.5	110	17.0	369	57.1	116	18.0

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36	06	1.8	33	10.0	56	16.9	160	48.3	076	23.0	36	10	1.5	57	8.8	111	17.2	367	56.8	101	15.6
37	07	2.1	28	8.5	63	19.0	166	50.2	067	20.2	37	08	1.2	44	6.8	117	18.1	394	61.0	83	12.8
38	06	1.8	13	3.9	53	16.0	179	54.1	080	24.2	38	06	0.9	22	3.4	088	13.6	423	65.5	107	16.6
39	05	1.5	14	4.2	66	19.9	167	50.5	079	23.9	39	05	0.8	22	3.4	120	18.6	394	61.0	105	16.3
40	05	1.5	14	4.2	47	14.2	145	43.8	120	36.3	40	08	1.2	08	1.2	065	10.1	369	57.1	196	30.3
Total	**324**	**2.44**	**749**	**5.66**	**1843**	**13.92**	**6853**	**51.76**	**3471**	**26.22**	**Total**	**389**	**1.5**	**981**	**3.8**	**3523**	**13.63**	**15719**	**60.83**	**5228**	**20.22**

In this table.4 comparison has been made on the basis of gender among ESL learners. The responses of 977 ESL learners have been recorded here. On the left side the responses of 331 male learners on the Likert scale of the questionnaire have been registered whereas on the right side of table.4, the responses of 646 female learners have been shown. The frequencies in the column of "Agree" and "Strongly Agree" on both sides show that 77.98 % male learners opted either 'Agree" or "Strongly Agree" whereas 81.05% female learners showed their responses in the favor of the statements. In case of the option "Agree" female learners excel significantly by showing 60.83 % responses whereas among the male respondents, 51.76% responses were recorded in favor of option "Agree". It shows that female learners have marginally more intention to adopt digital technology in developing language skills.

Hypotheses

The study also tested the following 7 hypotheses to answer the questions raised in the beginning and also to meet the research objectives of this study:

H1. External Factors (EF) have positive influence on the Perceived Ease of Use (PE) of digital technology for learning language skills.

H2. External Factors (EF) have positive influence on the Perceived Usefulness (PU) of digital technology for learning language skills.

H3. Perceived Ease of Use (PE) has positive influence on the Attitude toward Using (ATU) digital technology for learning language skills.

H4. Perceived Ease of Use (PE) has positive influence on the Perceived Usefulness (PU) of digital technology for learning language skills.

H5. Perceived Usefulness (PU) has positive influence on the Attitude toward Using (ATU) digital technology for learning language skills.

H6. Perceived Usefulness (PU) has positive influence on the Behavioural Intention to Use (BI) digital technology for learning language skills.

H7. Attitude toward Using (ATU) has positive influence on the Behavioural Intention to Use (BI) digital technology for learning language skills.

Table 5: ***Hypotheses testing (ESL Learners) -two tailed t-test applied in PLS***

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T statistics (|O/STDEV|)	P values

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EF -> PEOU	0.460	0.463	0.039	11.889	0.000
EF -> PU	0.210	0.212	0.033	6.399	0.000
PEOU -> ATU	0.253	0.255	0.037	6.809	0.000
PEOU -> PU	0.573	0.573	0.035	16.523	0.000
PU -> ATU	0.547	0.545	0.038	14.471	0.000
PU -> BI	0.343	0.344	0.040	8.483	0.000
ATU -> BI	0.414	0.415	0.036	11.581	0.000

Table.5 shows the hypotheses testing for ESL learners through their responses to the items or the indicators used during quantitative method of data collection. In the first column all seven hypotheses have been mentioned. Original sample (O) shows the number of items included in the observation. Sample Mean (M) indicates the average value of the original sample data. It is calculated by summing all values and dividing by the number of observations. Standard Deviation (STDEV) shows the amount of variation or dispersion in the data. It quantifies how spread out the values in the sample is around the mean. T-Statistic presents the computed t-value used in the hypothesis test and it indicates how many standard deviations the sample mean is away from the population mean. The p-value indicates the probability of observing the estimated effect, assuming that there is no real effect in the population (null hypothesis). A lower p-value (commonly < 0.05) suggests that the observed effect is statistically significant, leading us to reject the null hypothesis. Here p-value against all 7 hypotheses is 0.000, so all hypotheses are supported by data collected through ESL learners.

Figure.1:

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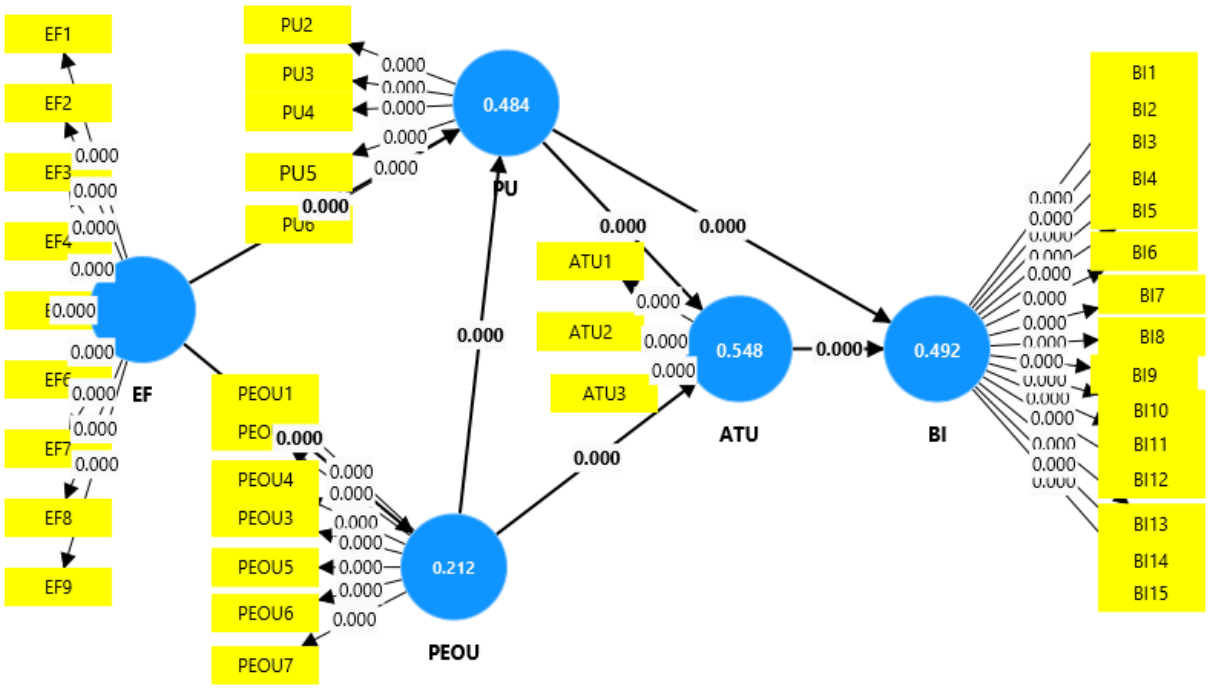

Figure1. shows the quantitative analysis done with PLS-SEM . The circles in the Figure.1 show the latent variables or the constructs, they are all related well to have a structural model. The paths or arrows show the p-values (0.000). Within circles R-square or the predictable proportion of variance in dependent variable (DV) is given. The rectangles show the indicators/items to the relevant factors. They are all loaded well on their relevant factor or the latent variable. So they complete a measurement model. It shows that the values affirm the model fit.

(b) Qualitative Data

In the second phase of the study, qualitative method was used to collect the data. For this purpose a semi-structured interview was conducted with 37 ESL learners of ten Public Sector Universities of Southern Punjab, Pakistan. The interview consisted of five questions adapted from the previous studies (Davis, 1989; Saleh, et.al.2013; Ghani, et, al.2019). The interviews were meant to get in depth observations and experiences of the learners regarding the use of digital technology and also to explore how far they have bettered their proficiency in English language skills as ESL learners of the Southern Punjab. Most of the respondents were interviewed in a face to face sitting but some of them were interviewed through mobile phone calls. The questions were aligned with the research objectives and the constructs of TAM model.

Table.6 **Themes and Sub-Themes from the Data of ESL Learners**

Statements of the questions in the Interview	**Major Theme**	**Sub-Themes**	**Descriptive Codes**

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Q1. How easy do you find it to use digital technology for learning the English language?	**Ease of Use**	**Easy &User-Friendly** **Easy with Experience** **Challenging**	I find it **easier**. With little time to comprehend the use of digital technology, **one can easily master it**. Sometimes **there are problems** but overall my experience is going good
Q.2 Do you believe that digital technology is useful in learning English	**Usefulness of DT**	**Useful & Productive** **Essential** **Engaging**	Yes, I **strongly believe** that is **beneficial** Yes**, it is quite indispensable** now a days Yeah, it **makes the process fun.**
Q3. How do you intend to incorporate digital technology in developing language skills like reading, writing, speaking and listening?	**Behavioral Intention to use DT in Language Skills**	**Writing & Editing** **Reading & Comprehension** **Speaking & Communication** **Listening & Multimedia Use**	I plan to use digital technology **to improve** reading through e-Books and articles, **writing via grammar apps and writing platforms** I do **article analysis for reading**. Speech reorganization for speaking. Podcast and speech to text tools for listening. I listen **TED talks and podcast** to improve **my speaking** and listening skills. I **listen TED talks and podcast** to improve my speaking and **listening skills**.
Q4. Do you find any challenges or difficulties in using digital technology for learning English regarding social norms, cost, technical	**Challenges in Using DT**	**Technical & Training** **Cost-Related** **Social Resistance Job relevant**	Yes, challenges **lack of technical skills**, often **connection issues**. Most platforms are free of cost, but there are some **high-paid versions**.

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experience and academic learning			Yes, challenges include **societal attitudes** **Yes**, challenges also have **relevance to academic learning**
Q5. How would you share your experiences of using digital technology as a part of learning your lessons of English?	**Personal Experience of Using DT**	**Positive for Lang-Skills** **Regular Usage Suggested** **Experienced DT,APPs & Platforms** **Danger to Creativity**	In learning process, it is **used for finding meaning, listening to their sounds learning new skills** But one thing is special that it should **be used regularly** and knowledge **update** is necessary I use different tools and devices like **ChatGpt, Grammarly** on daily basis but it **has a drawback** also that sometimes I feel it's **affecting my creativity skills**.

In Table.6 the data collected through interview has been showcased. As suggested by Clarke and Braun (2006), semantic type thematic analysis has been done. Data reduction was made under the suggested way of Siedel and Kelley (1995). After transcribing the recorded responses of ESL learners, decoding was done through repeated analysis of the text. Afterwards major themes and sub-themes were created and the relevant codes were searched from the collected data. Table 6 shows that 5 major themes 18 sub-themes have been generated out of the data collected through interview. Through the themes it comes out that the learners find it easy and useful to adopt and use digital technology. They also have positive behavioral intention to use digital technology in developing their language skills. However they also admit to face some challenges which are relevant to social norms, cost, technical skill and job relevant. The respondents also expressed their experiences of using digital tools in their language learning process. In response to the interview questions, they shared their experiences and also admitted how digital technology has benefitted them in learning language skills.

8. Findings and Discussion

The present study provides significant data regarding the perceptions of the ESL learners of the southern Punjab, Pakistan regarding the use of digital technology in enhancing their language skills. The data collected through questionnaire during quantitative method shows that the learners agree to the items or the statements of the questionnaire. The descriptive analysis of the quantitative data shows that the Mean value across the sample remains above 3.5 and even above 4 in some items which shows that respondents are mostly "Agree "or "Strongly Agree" to the

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given statements. In the same way, the value of mode which represents the most frequently opted value on Likert scale, also remained 4.It also shows that the most frequently opted response was "Agree" as it has quantifying value of 4 on the Likert scale.

The items used in the questionnaire also have very good reliability that has been calculated in Cronbach's Alpha by using the software of SPSS version 26. The Alpha's value remains 0.944 which is way above the threshold of 0.7 for the whole questionnaire or 40 items. This value has been above 0.7 in the case of all five sections of the questionnaire as well.

The data collected through the second instrument of interview also shows that ESL learners have no significant difficulty in using digital tools. They also find these digitalized tools comparative useful. The responses of ESL learners at Public sector universities of Southern Punjab, Pakistan also show that they are interested to use digital technology in enhancing their language skills like reading, writing, listening and speaking skills. However the learners also mentioned the challenges which they are facing while using digital tools and also about different applications and the technical skills required for dealing with digital tools and Apps. They also mentioned the challenges of cost as well. However they admitted that there are mild social issues in rare cases as too much use of it disturbs the family matters. As far as job relevant use of DT is concerned, it is more conducive and beneficial than the barriers.

The findings of the study are:

1. ESL learners of the undergraduate classes at the Public sector universities of Southern Punjab (Pakistan) find it quite easy to adopt and implement the digital technology in their language learning. They find it quite useful and handy in the English language learning.
2. The learners of English language have positive perception regarding the use of DT in developing their language skills. They also believe that different tools and Apps of DT are quite rich in providing support and interesting activities to the ESL learners.
3. The study also explores that the learners face some challenges in their social structure, in the cost of DT and some of them need some training to use the digital tools with better results. However they admitted that there are hardly any difficulties related to their job.

9. Conclusion

The study was meant to explore the perceptions of ESL learners regarding the acceptance and the use of digital technology in developing language skills. This case study focused on the ESL learners of undergraduate level at the public sector universities of Southern Punjab, Pakistan as this region is generally considered under privileged as compared with the other parts of the Punjab. The quantitative data collected from 977 ESL learners shows that they positively favor the adoption of digital technology as a helping aid in their learning process. Their responses to the statements of the questionnaire exhibit their positive feedback. They not only have positive attitude to use DT but also have intention to use it in future in enhancing their language skills. However they admit that in the matter of social norms, cost and technical skill, they often face some challenges. However they hardly face any difficulty in job relevance.

The qualitative data also testifies the earlier stance of ESL learners. However, during their responses to the interview questions, they demanded that the government and the educational institutes should provide digital facilities like access to internet data and the provision of laptops to the learners. They also demanded to have training regarding the latest digital tools and various

Apps. The learners also shared their past experiences of using digital technology and acknowledged to have positive gains to their proficiency and language skills. Based on the findings of the study it seems quite indispensable to provide training and technical assistance not only to the ESL learners but also to the teachers of English. It also came out that there are good many platforms and corpora regarding language skills (reading, writing, listening and speaking) as the producers of digital tools and digital service providers have focused the needs of the language learners. ESL learners need to have better facilities, proper training in digital technology and the implementation of these digital tools in the learning process.

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