



UNDERGRADUATE PERCEPTIONS OF CALL INTEGRATION IN ESL CLASSROOMS: A CASE STUDY FROM FAST-NATIONAL UNIVERSITY, PAKISTAN

Zainab Mubarik zainab.mubarik@nu.edu.pk	Lecturer, Department of Sciences and Humanities, National University of Computer and Emerging Sciences, Faisalabad, Punjab, Pakistan.
Tarim Masood tarimmasood42@gmail.com	Lecturer, Department of English, University of Sargodha, Sargodha, Punjab, Pakistan.
Muhammad Aqeel raoaqeel581@gmail.com	PhD Scholar, Department of English, University of Sialkot, Punjab, Pakistan.

Abstract

This study investigates the underutilization of Computer-Assisted Language Learning (CALL) in English as a Second Language (ESL) classroom in Pakistan, particularly at technologically equipped institutions like FAST-National University. Despite widespread digital access, traditional teaching methods prevail, limiting the pedagogical benefits of CALL. The objective of this research is to explore undergraduate students' perceptions of CALL integration, focusing on its acceptance, usability, and relevance to their learning needs. The present study is significant as it informs educators and policymakers about barriers and enablers to CALL normalization, contributing to improved technology-based language instruction. Employing an exploratory sequential mixed-methods design, the study gathered qualitative data through focus group interviews and quantitative data via structured questionnaires from 60 first-semester students. Guided by the Technology Acceptance Model (TAM), findings show that students generally hold a favourable view of CALL's usefulness and multimedia capabilities but remain cautious due to limited exposure, usability concerns, and lack of alignment with curriculum goals. The study concludes that for CALL to become an effective, normalized part of ESL education in Pakistan, institutions must enhance digital literacy, provide teacher training, and align CALL tools with learner preferences and pedagogical objectives.

Keywords: *Computer-Assisted Language Learning (CALL), ESL classrooms, Technology Acceptance Model (TAM), Undergraduate Perception.*

Corresponding Author: Zainab Mubarik (Lecturer, Department of Sciences and Humanities, National University of Computer and Emerging Sciences, Faisalabad, Punjab, Pakistan). Email: zainab.mubarik@nu.edu.pk

1. Introduction

The advancement in technology has fundamentally altered the method in which schools educate students all over the world, and specifically in the language study. The latest developments that are transforming the second language learning method involves Computer-Assisted Language Learning (CALL) is a subject that blends the latest technology with teaching techniques for improving learners' engagement and ability in the languages they want to learn (Chun, 2003). CALL encompasses a variety of gadgets that incorporate multimedia applications in addition to platforms to learn online. Apps for mobile devices and intelligent tutoring systems, which have been specifically developed to offer more customized individual and effective instructions for the languages that you choose (Beatty, 2013). The use of English as an Second language (ESL) classes, the integration of CALL are being praised as a novel method of instruction that provides students many possibilities to develop their languages they are proficient in by participating with online interaction.

In ESL settings, specifically those from developing countries such as Pakistan CALL has the ability to solve a variety of issues that have been present for a number of years due to the overcrowding of classrooms, instructors that aren't qualified, as well as an inaccessibility to real information about language. Through features such as integrated multimedia, automated feedback, and autonomy for students CALL will help improve their efficient and expressive abilities in language (Hubbard & Levy, 2016). However, the efficacy of these devices is not only on their accessibility or access, but how they are considered by students who use the CALL device. Based on Levy as well as Stockwell (2006) research, CALL's effectiveness is contingent on the learners' excitement, tolerance, as well as their involvement in the technology.

Despite the growing emphasis placed on the use of technology to enhance learning in Pakistani schools, the incorporation of CALL-related technology into the routine ESL instruction is not consistent (Abbasi et al., 2024). While many higher education institutions, like FAST-National University for example have access to technology infrastructures, CALL tools may not be adequate or not aligned with the objectives of educational. Additionally, teachers may not have the proper training required in the use of CALL effectively and efficient. Students may struggle to adapt to environments of

learning which differ due to an absence of knowledge (Zhao 2003). This is a reason to consider that it is important to consider the perspectives of the students to gain a better understanding of the problems and advantages of utilizing CALL in ESL classrooms.

The research area of CALL has expanded to include the strategies of learning, and has moved from only focusing on the capabilities of technology. It focuses on how students use technology as well as their requirements and results (Bax 2003). To accomplish this it is essential to think about the notion of normalization within CALL, where technology is an unintentionally integrated part of classroom activities. This is essential. Bax (2003) affirms that CALL can only be efficient once it has reached the stage of normalization where its use becomes routine and as simple to use an instrument or a textbook. Normalization isn't just about infrastructure. It involves a change of how teachers as well as students view and interact with technology.

Study of CALL's attitudes and perceptions provide important insights into the students' attitude and desire to study and their attitude, to the use of technology to assist students in acquiring the language. The most frequently used framework based on theory which is used for the study could be defined as "the Technology Acceptance Model (TAM) that was created in 1989 by Davis (1989) in 1989. Davis identified the perceptions of value and accessibility as two of one of the main elements that affect the acceptance of the technology. Further extensions to the TAM model include factors like personal norms and values, well as self-efficacy and along with innovation, to obtain an understanding of the characteristics of acceptance of technology in the context of education (Venkatesh and Davis 2000, Venkatesh and Bala for the year 2008).

In Pakistani classes, which use lecture formats in which the conventional method of teaching is used, but CALL is usually considered an add-on rather than an integral part. As in schools that have technological facilities, the students as well as instructors tend to stick back to the traditional method due to the absence of technology literacy and the pedagogical conservatism (Liu, 2011). That's the reason that the CALL devices while they're readily popular and readily available but aren't used much in teaching classes. It's crucial to know how students interact with CALL equipment in relation to the effectiveness of their use in addition to how they work in connection with learning objectives.

The students from the universities that attend FAST-National can be a crucial part of this investigation. They generally are in modern technological age and being expected to acquire digital literacy. The extent to which they consider CALL tools as an essential component of their ESL education isn't yet investigated. Understanding the perspective of the students will provide insight on the motivators and contextual factors which can

encourage the utilization of tools for CALL or discourage their use. Furthermore, this research will help teachers as well as the policy makers in creating programs that integrate technology, and is in line with pupils' preferences and needs (Stockwell 2012).).

Furthermore knowing the perspectives of undergraduate students could be an important element of discussions about students' autonomy and involvement. In the context of CALL where students are usually asked to assume greater responsibility in their learning and their own learning. This includes making use of technology as well as determining the pace at which they learn and their advancement (Reinders and White 2011). While this independence can act as the catalyst to more advanced learning, it requires an attitude of confidence and trust in self that a lot of students be unable to achieve. Thus, understanding what students' thoughts are about their expectations is crucial to develop assistance systems that allow them to get the maximum benefit from their use of CALL.

Additionally, socio-cultural and social aspects play significant influence on how students see technological advances. Warschauer (2000) affirms that CALL cannot be thought of as a permanent tool, but instead as an innovation in pedagogy that can be affected by the larger contextual and socio-cultural environment. It is a matter of Pakistani situation, a few aspects, such as the influence of the instructor and the use of traditional techniques of learning and exams-based courses could have a negative influence on the explorative and interactivity of this tool (Alsalem, 2020). Thus it is evident that their opinions regarding technology are interspersed numerous educational, technological and social influences that need to be scrutinized.

The research is aimed at investigating the views of undergraduate students regarding the integration of CALL in ESL classrooms, using FAST National University as an example. Through focusing on the perspectives of learners it will be able to reveal how much CALL integration is accepted as an everyday practice, the issues encountered by students, as well as their opinions on the possibility of integrating CALL for improving education in languages. The results can assist educators and curriculum developers and other institutions to understand aspects that could make or break the inclusion of CALL. This study can aid in the development of technologically-based teaching in the field of language in Pakistan along with similar ESL settings.

1.1. Research Problem

Digital technology has made Computer-Assisted Language Learning (CALL) crucial to the effectiveness of the educational system languages across the world. Concerning Pakistani higher education specifically particularly in the context of ESL

courses, the implementation of CALL is not widespread and is not widely employed. Despite the abundance of technologies that are digital, as well as the increased focus on educational institutions however, many schools still employ conventional methods that often overlook the advantages of CALL. A major aspect of the efficiency of CALL lies in the perception that students have of the benefits it offers and accessibility and suitability to their specific language needs. However, there is no study about how undergraduates in Pakistan especially those attending schools that have advanced technologies like FAST National University's view of the use of CALL. The understanding of their experiences and perspectives is essential to find gaps in processes, as well as assessing the methods used to teach and improving results of learning. The study aims at understanding their views for the purpose to guide the effective usage of CALL to enhance the quality of ESL instruction provided to students in the undergraduate level.

1.2. Significance of the Study

The significance of this study is that it provides insights into student's views regarding the integration of CALL in ESL classes. The research also uncovers the aspects that impact their participation as well as their acceptance. These findings will help educators instructors, curriculum creators, as well as policymakers to improve the efficiency of technologically-based language teaching. By identifying the barriers as well as the opportunities for CALL usage, this research assists in enhancing the pedagogy of teachers and encouraging more active learners-centered learning environments within Pakistani higher education institutions, particularly in relation with English language teaching. This research examines undergraduate students' perceptions of the acceptance and acceptability for Computer-Assisted Language Learning (CALL) within English classes at a local Pakistani university. The students were first involved in a variety of CALL related events. After that the students' views regarding their acceptance of and their integration into CALL were recorded, and later examined. An exploratory method that mixed methods used both quantitative and qualitative methods to meet the purposes of the study.

2. Research Methodology

To investigate learners' perceptions and beliefs regarding the acceptance of CALL in pedagogy, the study employed an exploratory sequential mixed-method approach, as outlined by Creswell (2018). In this approach, qualitative data is first collected and analyzed to shape the quantitative phase that follows. This sequence ensures that the initial insights gained qualitatively inform the structure and focus of subsequent quantitative measures such as surveys and questionnaires.

Qualitative data, collected through focus group interviews, provided a comprehensive understanding of learners' experiences. These interviews served as a foundation for constructing the quantitative questionnaire. The exploratory method was particularly appropriate given the limited prior research on CALL normalization in this specific context, helping to clarify the "what," "how," and "why" aspects of the issue (Dudovskiy, 2019).

2.1. Sample

The study used purposive sampling to select 60 undergraduate students enrolled in the first semester of their Bachelor's program at FAST-National University. Purposive sampling, a non-probability method, allowed the researcher to intentionally select participants expected to provide relevant and insightful data. This technique is effective in situations where reaching a specific population is challenging or where the research demands in-depth exploration from particular individuals (Bock, 2018).

2.2. Theoretical Framework: Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM), introduced by Davis (1989), serves as the theoretical basis for this study. TAM emphasizes two core determinants influencing users' acceptance of technology: perceived usefulness (PU) and perceived ease of use (PEU). Later iterations, TAM2 (Venkatesh & Davis, 2000) and TAM3 (Venkatesh & Bala, 2008), incorporated additional constructs such as subjective norms, job relevance, and output quality to broaden the explanatory power of the model.

In this study, TAM is extended by incorporating perceived behavioral control (PBC), behavioral intention (BI), personal innovativeness in IT (PIIT), and subjective norms (SN), making it more contextually relevant to the CALL environment. This integrated framework assists in predicting and explaining learners' acceptance or rejection of CALL technologies.

2.3. CALL Activities

Students were exposed to various CALL-based tasks, including reading comprehension, listening comprehension, paraphrasing, vocabulary exercises, picture explanation, and fill-in-the-blanks. These activities were inspired by principles of Intelligent CALL (ICALL), which aims to adapt natural language processing tools for foreign language learning (Amaral & Meurers, 2011). Each activity provided real-time, individualized feedback, enhancing learner engagement and fostering familiarity with digital pedagogical tools.

2.4. Data Collection

Primary data were collected through a structured questionnaire and focus group interviews. The questionnaire comprised two sections: demographic information and a Likert-scale-based assessment of learners' perceptions of CALL. Thirty-three closed-ended statements allowed respondents to express agreement levels ranging from "strongly disagree" to "strongly agree."

Focus group interviews enriched the qualitative dimension of the study. Each group included six undergraduate students enrolled in an English language course. A moderator guided the discussions using open-ended questions, while the researcher observed and took detailed notes. Ethical protocols were followed, including ensuring voluntary participation and confidentiality of responses.

2.5. Research Tools

Questionnaire: The questionnaire was designed to gather both demographic and perceptual data. Piloting ensured its reliability and clarity. Questions included multiple choice and Likert-scale items, which are standard in social sciences for gauging opinions and beliefs (Cohen et al., 2007). Open-ended and ratio data questions were avoided to maintain focus and facilitate straightforward analysis.

Focus Group Interviews: Focus groups offered an in-depth perspective on the learners' experiences and interpretations of CALL. Following Krueger's (2002) approach, the group consisted of 6–8 participants, with one acting as a moderator to ensure balanced participation and manage the discussion effectively. While recordings were declined by participants for privacy reasons, detailed notes were taken and verified by the group for accuracy.

2.6. Data Analysis

The analysis employed a mixed-methods framework, integrating qualitative and quantitative data analysis. Quantitative data were processed using the Statistical Package for Social Sciences (SPSS) version 28.0, allowing for descriptive and inferential statistical evaluations. Qualitative data from focus groups were analyzed using NVivo version 12.0, which supported thematic coding and narrative synthesis.

Descriptive statistics such as means, standard deviations, frequencies, and percentages summarized the questionnaire data (Isotalo, 2001; Weiss, 1999). Inferential statistics enabled conclusions to be drawn from the sample data, with hypothesis testing used to identify significant patterns and relationships.

2.7. Statistical Tools

- Standard Deviation: Used to measure the variation in participants' responses from the mean, providing insight into consistency across the sample (Garg et al., 2014).
- Frequency & Percentage: Applied to understand how often specific responses appeared, offering a clear picture of general trends among the learners (Kuthari et al., 2014).

2.8. Ethical Considerations

Following the American Psychological Association's (APA, 2010) guidelines, the researcher upheld ethical integrity throughout the study. Informed consent was obtained from all participants, and confidentiality was maintained. The study avoided plagiarism and respected both federal and provincial research laws. Participants were informed that their responses would only be used for academic research purposes and not shared beyond the research context.

3. Results, Findings and Discussion

3.1.1. Term CALL meaning

Concerning their understandings about the term CALL, majority of the interviewees stated that CALL means the methods and techniques of learning and teaching a language involving digital systems, computer software applications and communication (human computer interaction) hardware. Interviewee number put it as "Computer-assisted language Learning (CALL) is an approach to teach and learn in which the computer and computer-based resources such as the Internet are used to present, reinforce and assess material to be learned". Most of the learners took part in interview they had the idea about the term CALL because it was the major part of their English language course. Interviewee No. 3 comments in this respect "CALL is a modern way to learn a language by using the computer. It helps students to learn the language in a better way where a computer acts as a facilitator in learning language process. It has a positive effect on each of the 4 language skills.

3.1.2. Perception of using CALL in Language Lab

Almost all the interviewee had positive perceptions about the use of CALL in learning a language as interviewee No. 1 stated that she did not use it before learning this course "I believe that CALL has the potential to be used as a teaching or learning tool in

improving language skills. By using this language learning process, I have learned a lot and improved my language skills”.

3.1.3. The revolution of learning

All the respondents have the positives response about the role of CALL in revolution of learning as interviewee No 1 stated that “If I talk about the learning through computer so definitely technology has revolutionized the technology in every sense e.g. nowadays we have cell phone, laptops and computer in homes so we can save our time and learn any time when we want... Technology made our life comfortable”.

Another interviewee responded “Indeed, modern technology has brought a revolution in learning as it has involved some new and interesting techniques for learning a language that have made language learning easy. Nowadays, it is observed that many people around the world are learning second languages using CALL and after a very short period of time, they become fluent in speaking and writing as well”

3.1.4. CALL and Traditional way of learning

Exploring our interviewees’ perceptions about the CALL and traditional ways of learning majority of them were in favor of CALL. As interviewee No 6 stated that “Traditional learning involves some old and few strategies for learning a language which make learning gradual and time taking. These strategies are also very complex and may be difficult for some weak minded people. We see many people could not use language properly despite proper learning. While CALL provides modern methods that help develop interest in people, make learning flexible and quick and comprehensive. Hence, it is the time factor and wideness of methods that creates the difference”.

3.1.5. Implementation of CALL in Pakistan

As for the implementation of CALL interviewees have different perceptions about it as interviewee no 4 stated that “For the implementation of CALL that can be an optional thing and based upon the individual's own set of interests. If someone wants to learn some language, he should be provided with the adequate resources. If someone fell himself comfortable with whatever lingual skills he is living, then it should be left on his/her choice”. On the other hand, interviewee, no 3 said “Here in Pakistan, CALL should be implemented at the undergraduate level for learning language because of the incapacity of the local education system of Pakistan. In Pakistan, at school and college levels, the language learning is traditional and done along with ridiculous strategies like cramming etc. Due to such glitches in the system, we see that majority of the students that pass through their school and college phases, are not much across their language(s).

They neither can speak correctly nor can write correctly. To complete such deficiencies there is a need to implement CALL at undergraduate level so at least they should be able to use language correctly when they enter practical life”.

In order to analyze the learners’ perceptions about the acceptance of CALL Normalization questionnaire was not enough to collect data and get perceptions. For that purpose, the focused group interviews of learners have been conducted to analyze the perceptions of the learners. As based on the responses of the interviewees majority of the learners were in favor of implementing Computer Assisted Language learning application and activities in a language classrooms or labs.

The members of focus group interviews were 8 undergraduate students who were enrolled in an English Language Learning Course. First of all, the all members of the Focus Group were apprised by the researcher regarding the purpose of the discussion in order to rule out the possibility of any ambiguity in the minds of the members.

The content analysis was conducted through Nvivo in order to analyze the learners’ perceptions regarding the acceptance of CALL Normalization. The themes identified from the learners’ responses included a number of major points focusing on:

3.2. Focused Learning

With respect to pedagogical benefits of CALL, researchers have already established that ESL programs find the use and knowledge of CALL to be essential to effective instruction. CALL is a diversion from the traditional methods, and language

teachers need to be aware of technology integration and the possibilities it holds for ESL classes. In CALL environment the focus is on learning not teaching and students finds it more interesting while learning language skills.

3.3. Learner Centeredness

Most interview participants perceived CALL as supporter of learner-centered teaching-learning process. Overall, CALL can easily generate learner-centered, autonomous language learning. In addition, the interview findings demonstrated a significant relationship between the use of CALL and motivation. The interviewees believed that if students are motivated to learn, then CALL could increase their motivation to learn English. This is in support of some previous positions that regarded CALL as a motivator in language classrooms (Chen, 2011; Kim, 2008).

3.4. Multimedia Effectiveness

The benefits of multimedia in language learning have been established by the experts in CALL (Chapelle, 1998). The participants have pointed out certain advantage of multimedia, that is, the use in pronunciation, listening and speaking skills, and writing.

However, multimedia environments have been widely used for many years as a delivery tool in second/foreign language learning, by providing different media modalities. For example, the participants in the interview found multimedia the best way to learn listening and speaking skills. Previous studies have established the benefits of multimedia use with pictorial or/and written glosses for text and listening comprehension as well as vocabulary recall and recognition (Aldera & Mohsen, 2013; Jones, 2006). In addition, multimedia facilities enhance communication and interaction with international language learning communities. The participants are aware of the use of drills and quizzes to check the progress of linguistic acquisition.

3.5. The implementation of CALL

Though ESL teachers were using CALL for learning, for classroom preparation, and for teaching, their uses seem to be limited in nature. The uses for learning and classroom preparation are moderately acceptable, however, CALL in actual classroom practice is very limited in nature. Some of them were using the Internet to browse materials for their professional improvement. The use for lesson preparation varied from dictionary checks to browsing for information. However, most participants were not regular users of technology in their classroom teaching. This is an area that needs more attention. Since ESL teachers have perceived the benefits of CALL in ELT, they need to be responsible to adapt to the changing situations.

The group was asked by the researcher about the term CALL, Perception of using CALL in Language Lab, The revolution of learning, CALL and Traditional way of learning, Implementation of CALL in Pakistan. All the members of the group asserted that CALL is beneficial to be used in learning a language because CALL authoring programs offer a do-it-yourself approach. Modern CALL authoring programs are designed to be used by language teachers who have no prior knowledge of computer programming. CALL is essentially a tool that can be used to reinforce what has already been learned in the classroom or as a remedial tool to help learners who require additional support.

They further stated CALL provides some extended and interesting methods to get the grammar concepts of a language very easily without getting confused. For example, there are games involving particular concepts that develop an interest in the user etc.

Moreover, some practice exercises and interesting activities that involve communication skills as well are provided by CALL.

3.6. Learners' Questionnaire

The questionnaire of the students comprised of many parts meant to respond to the above-mentioned research questions. These are the following aspects:

- Background information for students.
- Access to the computer
- Use of CALL to study
- Attitude of students (affective domain, cognitive domain, behavioural domain)
- The probability of ICT adoption by students (perceived usefulness, easy perception, compatibility with learning methods, computer compatibility)
- Computing skills of students
- Problems impeding CALL Normalization

The questions in the student questionnaire also changed according to the nature of the data the researcher sought to get from one part to the other.

3.6.1. Learners' Background Information

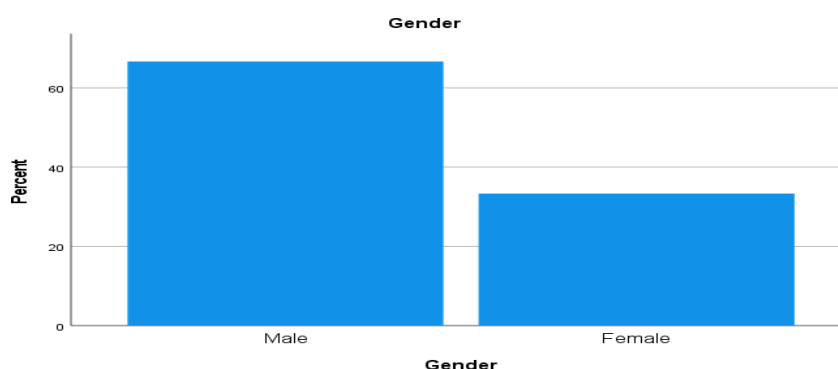


Figure 1: Participants' Gender

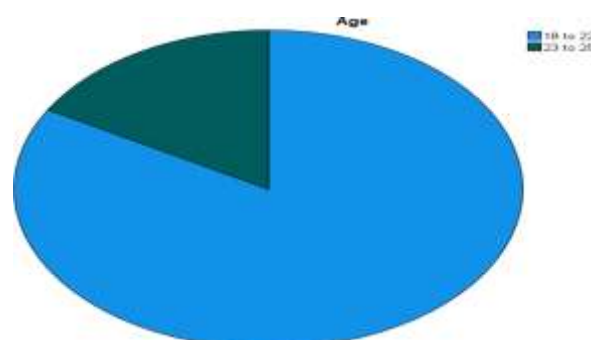


Figure 2: Participants' Age

With regard to the gender distribution of the respondents, the proportion of male participants was overwhelming as the sample was more than 66.7%. Whereas participants were not more than 20 women (33.3%). The questionnaires were allocated randomly, irrespective of the age, sex, or grade of the student.

The distribution of the age of the students who participated in the current study is displayed in Figure 2. Students aged 18 to 22 in combination accounted for 83.3% of the total. However, between 23 and 25 years of age, 16.7% of the total sample population was not exceeded. This age distribution was the outcome of the exceptional involvement of first year students.

3.7. Students' Attitude

It is worth noting that a mixture of negative and positive wordings was employed in this part to minimize admissibility (Nunnally, 1967), and answers were gathered on a five-point scale for the Likert. Where required items were reverse-coded in order to make greater values an improvement in ICT provision. The answers, meanwhile, were a 5-point range of 1 (Strongly Disagree) to 5 (Strongly agree).

3.7.1. Affective Domain

Table1: Students' Affective Attitude Domain towards ICT

Questions	N	Min	Max	Mean	SD
1. I am not afraid of computers.	60	1.00	5.00	3.9000	1.41061
2. I feel not comfortable while using computer.	60	1.00	5.00	1.8833	1.27680
3. I am delighted more computers are available these days.	60	1.00	5.00	3.9000	1.24465
4. I do not like to talk about computers with others.	60	1.00	5.00	2.3167	1.34658
5. It is fun to use computers.	60	1.00	5.00	4.0500	1.12634
6. When I am studying, I do not like to use computers	60	1.00	5.00	2.7167	1.34154

The results shown in Table 4.1 are answers to questions 1 to 6, aimed at assessing the affective field of the attitude of the pupils in learning about CALL. All questions have a pretty high value of 1.8 to 4.05. Similarly, for virtually all items standard deviations stayed at a one-point level, which implies the replies to certain existing variances were inconsistent, as the mean values vary from 1 point to 5 points (maximum value). The interviewees have shown several good indicators because of the lack of concern about CALL, the comfort of the computers and the rising number of computers, and the

enjoyment with computers, which may be described as a favorable attitude by students towards CALL.

3.7.2. Cognitive Domain

Table 2: Students' Cognitive Attitude Domain towards ICT.

Questions	N	Min	Max	Mean	SD
7. Computers help people save time and effort.	60	1.00	5.00	4.1667	1.20966
8. Without computers, universities would be a better place.	60	1.00	5.00	1.9833	1.18596
9. In all modules, teachers are required to use computers.	60	1.00	5.00	3.4833	1.37152
10. It is a waste of time to learn about computers.	60	1.00	5.00	1.4667	1.04908
11. Computers would encourage me to study more.	60	1.00	5.00	3.3667	1.33996
12. Computers are a quick and effective way to obtain information.	60	1.00	5.00	4.2167	1.15115
13. I do not think I will ever need a computer to learn English.	60	1.00	5.00	2.4167	1.26614
14. Computers can help me learn more effectively.	60	1.00	5.00	4.0833	1.13931
15. Computers do more harm than good.	60	1.00	5.00	2.3500	.95358

The purpose of Questions 7 to 15 was to measure the cognitive domain of the attitude of students towards CALL. The responses of the students varied from favorable to indifferent. On the one hand computers were thought to be an effective way for obtaining information ($M = 4.2$) saving time and effort ($M = 4.1$), and to be able to improve learning ($M = 4.08$) through student motivation ($M = 3.3$). On the other hand, students were less certain that computers will be utilized in all courses ($M = 2.4$) and would have a good impact on their learning ($M = 3.3$). The 3.3 mean total score generated by all the elements combined is considered the benchmark for what might be regarded as a good attitude, and a number of objections can be made about the positive cognitive attitude towards CALL.

3.7.3. Behavioural Domain

Table 3: Students' Behavioral Attitude Domain towards ICT

Questions	N	Min	Max	Mean	SD
16. I like to do things by hand rather than using a computer	60	1.00	5.00	2.7167	1.31602
17. If I had the money, I would invest in ICT tools and materials to help me improve my English skills.	60	1.00	5.00	3.1000	1.53711
18. I would avoid using computers as much as possible	60	1.00	5.00	2.4333	1.28045
19. I would like to learn more about computers	60	1.00	5.00	4.1333	1.11183
20. In the near future, I have no intention of using computers	60	1.00	5.00	1.8167	1.29525

Table 4.3 shows the answers of learners in relation to CALL conduct. While we were prepared to buy CALL tools ($M = 3.1$), our participants learned about computers in future ($M = 4.1$), were uncertain as to whether or not they preferred traditional techniques or computing ($M = 2.7$). They were not prepared to purchase them. Although the standard differences are very significant, thus the reactions varied greatly, a total mean score of 3.01 can only be characterized as a restrained favorable attitude to CALL.

3.7.4. Perceived Usefulness

Table 4: Learners' Perceived Usefulness of ICT

Questions	N	Min	Max	Mean	SD
21. Computers will help students learn better.	60	1.00	5.00	4.1833	1.03321
22. Computer-assisted learning has a number of benefits over traditional teaching approaches.	60	1.00	5.00	4.0000	.99149
23. Computer technology cannot improve the quality of my education.	60	1.00	5.00	2.4500	1.40731
24. Using computer technology in the classroom would make the subject matter more interesting.	60	1.00	5.00	3.9000	1.17459
25. Computers are not helpful while learning a language.	60	1.00	5.00	2.1000	1.14537

The purpose of items 21 through 25 is to investigate the impression of the use of CALL by students. Although our answer was undecided if CALL was able to improve language training ($M = 2.4$), they clearly stated that computers are believed to improve learning ($M = 4.1$), that using a leaning computer is more beneficial than traditional methods ($M = 4.0$) or that computers are useful in language learning ($M = 2.1$) because they make matters of greater concern ($M = 3.9$). A combined average score of 3.19 and standard deviations of about 1 show that students thought that CALL was beneficial.

3.7.5. Perceived Ease of Use

Table 5: Students' Perceived Ease of Use of CALL

Questions	N	Min	Max	Mean	SD
26. It would be hard for me to learn to use the computer in English language learning	60	1.00	5.00	2.3667	1.20685
27. I have no difficulty in understanding the basic functions of computers	60	1.00	5.00	3.8667	1.30795
28. Computers make learning more difficult and complicated.	60	1.00	5.00	2.0500	1.18501
29. Anyone can learn quickly how to use a computer	60	1.00	5.00	3.6667	1.20263

The findings of questions 31 to 34, meant to evaluate the perception of students as computer usability, are presented in Table 5. Although student responses showed that computer understanding was difficult ($M = 3,86$) and disagreed with their claim that computers were complicated to learn ($M = 2,05$), they were somehow neutral about how to learn CALL ($M = 3,66$) and how easy it was for everybody to learn how to use computers ($M = 3,65$). However, a mean total score of 3.33 is a guarded favorable view of easy usage of CALL.

3.7.6. Compatibility with Learning Practices

Table 6: ICT Compatibility with Students' Learning Practices

Questions	N	Min	Max	Mean	SD
30. The usage of computers is well-suited to the learning goals.	60	1.00	5.00	3.7167	1.20861
31. The amount of time available in class for computer use is insufficient.	60	1.00	5.00	3.5333	1.18560
32. Computer use suits my learning preferences and their level of computer knowledge.	60	1.00	5.00	3.7500	1.00212
33. Computer use is appropriate for many language learning activities.	60	1.00	5.00	3.9333	1.11791

Table 6 presents the replies of the students in questions 26 through 30, to see if CALL fitted into learning methods of the students. The comments of the students ranged from good to negative. While they thought that computer use fitted for learning languages ($M = 3.9$), the question remained whether computers fit into curricular goals ($M = 3.7$) and if CALL matched their learning preferences ($M = 3.7$) was still unresolved. In the meanwhile, informants clearly indicated that they thought class time to incorporate CALL was too short ($M = 3.5$). With a median overall score of 3.5 and relative consistency in all answers (in most cases SD is 0.9) one might argue that the suitability of CALL to their learning remained unclear for our informants.

3.8. Quantitative Data Discussion

Questionnaire analyzes show that around 70% of student populations utilize technology on a regular basis, whilst the other 30% are less consistent users. This substantial share of the students who don't utilize CALL on a regular basis in a technology-dominated and generational period raises several issues regarding CALL's potential to benefit for our kids. There are two primary causes for this lack of interaction. First of all, computers from all technologies are formulated as other smaller and mobile gadgets such as smartphones and tablets are now generated. This question has been underlined. The

second explanation might be the same as that pointed out by teachers who are unable to provide a computer and other technical equipment for some children.

The second reason is that 7.5% of students said they never had access to computers at home, most likely because of the lack of those gadgets. The student questionnaires for the site of computer access still conform with those of teacher students, since home is the favorite place for students to access computers, mostly owing to the unexplained lack of computer labs and internet connectivity. When it comes to the usage of CALL for learning, 67,2% of students show that they have utilized CALL, while the other 32,8% reactions have been non-existent. Once again a very significant number, particularly in view of the fact that English has been received by software developers from every language because of the fact that a considerable number of websites, applications and other CALL tools for learning English, most freely and easily accessible, have emerged.

This lack of computing, teachers and the University as a whole cannot play their part in training and guiding students on how to use CALL, or simply, as a single teacher points out, the lack of autonomy of students and the tendency to count exclusively on teachings. These reasons can include the lack of the necessary means (computes, the Internet, etc.). Students who have declared experience with CALL documents have mentioned all sorts of technologies that they have been using, although their favorites are instructional websites, video and CMC tools. These highly internet resources may be invested in and promoted for the learning of pupils.

The attitude of students to CALL was assessed in three fields. The questionnaire indicated that students show no sensation of dread or anguish for CALL and enjoy ICTs since they had a positive emotional behavior ($M = 4.14$). In the same way as the findings of instructors, our pupils also shown greater ambiguity with regard to their cognitive attitude and some stayed neutral since the average score was overall 3.98. While respondents have indicated clearly that computers may be utilized in classrooms and save time and effort, they are uncertain whether and how much CALL should be used across all topics. That insecurity regarding the use of CALL in all subjects and the ambiguities of CALL effectiveness arising from students' ignorance of the various applications and advantages of CALL resulting from a restricted contact with teachers' practices and teaching technologies that do not incorporate CALL adequately or limit its use to the most basic ones. The pupils also showed that their behavior in regard to CALL was positive yet guarded, with a mean score of 3.97 overall. While they wanted to learn more about computers and even utilize them for learning purposes in the future, they remained agnostic whether they favor CALL or conventional techniques.

As mentioned before, pupils are more comfortable with the only ways, i.e. conventional methods, they have encountered. Until instructors alter their techniques, successfully incorporate CALL, and promote knowledge of CALL applications and advantages, we are going to stay in the same vicious loop and most likely end up avoiding CALL by future teaching generations using conventional ways. Similarly, the more guarded attitudes of cognition and behavior correspond with a point of view for respondents' number two, which stated that the students enjoy ICT as it is an ordinary element of their everyday life. Therefore, their attitudes toward CALL therefore remain positive until they find that the use of CALL entails additional task and compels them to move from their passive mode in which they do nothing but appear in classroom or listen to a teacher's lecture to a more active way of managing their education with CALL.

With regard to students' probability of CALL, the usefulness and ease of use of CALL was examined (Davis' Technology Acceptance Model, 1989). The students perceived CALL utility evidently favorable with an overall mean score of 3.19.

Conversely, the same does not true to their CALL usability perception, because an overall average score of 3.33 is just a restrained favorable assessment. This is about students' worries about how they can cope with a technologically advanced environment, because respondents do not appear sure if they would be able to learn English by using computers and grasp the many functions of computers. Moreover, consistent (SD = 0.9) average overall score of 3.7 obtained by students when asked about the compatibility of CALL with their learning practices adds to the problem, since students still question whether CALL fits into curriculum goals and limited time for class despite their acceptance that computers have a place in EFL classrooms. This conflicting and shadowy picture is the direct result of the lack of knowledge about the several uses of the CALL system. As perceived utility affects more than perceived ease of use for CALL adoptions (Yuen & Ma 2000). Since the usability can be accomplished easily by adequate training and support, students can only be overcome by a proper modeling and good CALL experience in their perception of CALL compatibility with their training.

The total mean score of 3.03, obtained by learners when assessing their fundamental computers indicates that the majority are frequent technological users. Participants, however, reported that they have poor expertise when it comes to the more advanced competences that directly relate CALL to their learning, such as the selection of educational programs and the use of CALL to improve their language skills, which confirms their doubts earlier about the management of a technology-enhanced learning environment. Students have access, but not being able to properly utilize these resources and use them effectively, to certain important CALL-tools such as computers, Internet cellphones, free educational websites and software, which discourage and prevent all

efforts to include CALL in their learning efforts. The usage of CALL and its influence on learning therefore need to be properly trained and guided (Chien, 2004, cited in Wang et al., 2008). However, if we look at the computing expertise of the students closely, we will find out that they are inclined to utilize the internet and the CMC tools. Two main CALL instruments which can have an enormously good impact on pursuing students if they are appropriately and efficiently used.

4. Conclusion

The findings of this study underscore the evolving yet cautious acceptance of Computer-Assisted Language Learning (CALL) among undergraduate ESL learners in Pakistan. While students generally demonstrate a positive affective attitude toward CALL, appreciating its novelty, accessibility, and potential to enhance language learning, their cognitive and behavioral responses remain mixed. Many students recognize the advantages of CALL—especially in fostering learner autonomy, focused learning, and multimedia engagement—but still express uncertainty regarding its ease of use, compatibility with traditional teaching practices, and their own technical readiness.

Despite being part of a digitally connected generation, students' limited exposure to CALL beyond the classroom, coupled with infrastructural and pedagogical constraints, hinders full integration. The Technology Acceptance Model (TAM) provided a useful framework to understand these dynamics, revealing that perceived usefulness tends to outweigh perceived ease of use, suggesting that students are more motivated by potential benefits than by operational simplicity.

Additionally, the lack of institutional support, insufficient teacher training, and traditional exam-oriented systems further complicate CALL normalization. Learners appear to value CALL most when it supplements rather than replaces conventional instruction, particularly through interactive, flexible, and learner-centered tools. However, to shift from guarded acceptance to active engagement, students must be equipped with not only access to technology but also the skills, encouragement, and contextual support to use it meaningfully.

Overall, the study calls for a more structured and pedagogically grounded integration of CALL in ESL classrooms—one that aligns with students' learning preferences, institutional capabilities, and the broader educational culture. Teacher training, curriculum redesign, and student digital literacy must work in tandem to ensure CALL is not only accepted but embraced as an integral part of modern language education in Pakistan.

References

- Abbasi, A. M., Solangi, M. A., Niazi, S., & Khokhar⁴, S. (2024). A Study on the Integration of Computer-Assisted Language Learning in ESL Classrooms of Urban Public ssColleges. *Migration Letters*, 21(S7), 120-131.
- Alsalem, M. S. (2020). *Language Teacher Cognition on English Grammar Assessment: Investigating EFL Teachers' Beliefs and Practices regarding Classroom-based Assessment in Public Higher-Educational Institutions in Saudi Arabia* (Doctoral dissertation, University of Essex).
- Bax, S. (2003). CALL—Past, present and future. *System*, 31(1), 13–28. [https://doi.org/10.1016/S0346-251X\(02\)00071-4](https://doi.org/10.1016/S0346-251X(02)00071-4)
- Beatty, K. (2013). *Teaching & researching: Computer-assisted language learning*. Routledge.
- Chun, D. M. (2003). *Computer Applications in Second Language Acquisition: Foundations for Teaching, Testing and Research*.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340. <https://doi.org/10.2307/249008>
- Hubbard, P., & Levy, M. (2016). Theory in computer-assisted language learning research and practice. In *The Routledge handbook of language learning and technology* (pp. 24-38). Routledge.
- Levy, M., & Stockwell, G. (2006). *CALL dimensions: Options and issues in computer-assisted language learning*. Lawrence Erlbaum.
- Liu, S. H. (2011). Factors related to pedagogical beliefs of teachers and technology integration. *Computers & Education*, 56(4), 1012-1022.
- Reinders, H., & White, C. (2011). Learner autonomy and new learning environments. *Language Learning & Technology*, 15(3), 1–3.
- Stockwell, G. (2012). *Computer-assisted language learning: Diversity in research and practice*. Cambridge University Press.
- Venkatesh, V., & Bala, H. (2008). Technology Acceptance Model 3 and a research agenda

on interventions. *Decision Sciences*, 39(2), 273–315.
<https://doi.org/10.1111/j.1540-5915.2008.00192.x>

Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the Technology Acceptance Model: Four longitudinal field studies. *Management Science*, 46(2), 186–204. <https://doi.org/10.1287/mnsc.46.2.186.11926>

Warschauer, M. (2000). The changing global economy and the future of English teaching. *TESOL Quarterly*, 34(3), 511–535. <https://doi.org/10.2307/3587741>