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A Study on the Integration of Computer-Assisted Language Learning in ESL Classrooms of Urban Public Colleges

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ABSTRACT

The current survey aims to investigate how computer-assisted language learning (CALL) is incorporated into English language classes and can be integrated in the best of the best possible manner at Karachi public colleges. This study further looks at English language teachers' attitudes toward CALL learning and the administrative support needed for the integration and use of digital applications in ESL classrooms, considering English is the official language of instruction in all Pakistani educational institutions. The survey research design, which combines theme and quantitative evaluation is used. A Likert scale analysis of 4 items—agree, disagree, strongly agree, and strongly disagree—was employed to examine 26 queries concerning the integration of instructional technology. The principals of the comparable colleges and the interview-focused group of ELT (English Language Teaching) faculty members were the subjects of the thematic analysis. To use the purposive sampling technique, the data were collected from twenty-six serving English language teachers and six principals from various public institutions were interviewed. The findings show that English language teachers, administrators, directors, and principals are enthusiastic about integrating Education Technology (EdTech), but they expect the Government to provide instrumental equipment support and conduct training to ensure the successful implementation of technology in English language classes. It will have a long-term impact on English Language Teaching in Karachi's public colleges, allowing students to improve their language skills significantly.

Keywords: *ESL learners, CALL, colleges, public, teaching methods, integration of technology.*

INTRODUCTION

The integration of Computer Assisted Language Learning is a crucial step towards modernizing the learning experience through the use of sophisticated technological tools. The benefits of digital applications are three-fold, offering advantages both inherent to computers and EdTech, and proving conducive to language learning for students while increasing productivity for language instructors. EdTech provides learners with unlimited teaching materials that enhance class participation and motivation. Additionally, learners can stay connected to language instructors even outside the conventional classroom through

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the use of digital applications. The implementation of EdTech in language learning is a viable solution for those seeking to provide students with a more dynamic and engaging learning experience. Finally, if authentic material is used in teaching and strategies, it will certainly enhance positive practice of authentic language in real life, which keeps learners motivated, as suggested by Levy (2009). This study aims to examine the perceptual views of college teachers regarding the use of Computer-Assisted Language Learning in Public colleges located in Karachi, Pakistan. English is the official language of instruction in all academic institutions in Pakistan, from school and college level and to the higher education. Language practitioners use different teaching methods and strategies based on available resources and learners' needs. However, traditional teaching methods are still common and lack innovative strategies and expertise in teaching English.

Additionally, these conventional methods affect learner performance and academic results (Abbasi, 2011). The grammar translation method, for example, is less recommended after the emergence of various teaching methods. Abbas (1998) claims that the passing percentage in English language at the college level in the country is not satisfactory, and many factors contribute to poor performance, such as obsolete teaching techniques, stressed learning, excessive number of learners in classroom, poor planning from the administrative side, lack of training and expertise for language teachers, and lack of learning motivation on the learners' part. To overcome these challenges, computer technology is a good alternative to conventional methods of language teaching. The study uses a survey research design method to reveal the perspectives of college teachers and analyze thematically the level of administrative support provided by the Public for the successful implementation of learning and teaching through EdTech in English classes. The study seeks to answer the following research questions:

- What are English language teachers' attitudes regarding the use of CALL in ESL Classroom?
- Do colleges support CALL integration in English language learning classes?

PRIOR WORKS

Teachers often face difficulties when attempting to integrate technology in their classroom, due to the unavailability or inaccessibility of the desired technologies for them or their students (Ely, 1999). However, in recent years, the availability of technology in schools has significantly increased (Bausell, 2008). In 2009, Gray, Thomas, and Lewis (2010) conducted a survey of 2,005 public schools across all 50 states in the U.S. Out of the total 4,133 surveys administered, 65% responded. According to the results, it was estimated that 97% of teachers in the U.S. had access to at least one computer in their classroom every day, with an average ratio of five students per computer. Furthermore, the survey indicated that 93% of schools had access to the internet.

Computer-Assisted Language Learning is a teaching method that uses computer applications for language learning. Ahmad (1985) states that the rapid advancements in computer technology during the 1960s and 1970s prompted linguists, language practitioners, and researchers to explore the use of computers in language teaching. Prior to CALL, a teacher-centered approach known as CALI, or Computer-Assisted Language Instruction, was common. CALL has widened the scope of communicative approaches and the use of digital technology in language teaching, providing opportunities for interactive learning in various language skills such as speaking, listening, reading, and writing. Multimedia and internet sources are also encouraged to enhance the learning experience (Davies et al., 2012).

A study conducted by Warshauer and Healey (1998) divided Computer-Assisted Language Learning into three different approaches, each with its own perspective and usage. The first approach, behaviorist CALL, led to the development of translations and grammar instructions. This approach emerged during the 1960s and 1970s and helped enhance language learning through drilling techniques and behavior. The second approach, communicative strategies, motivated learners to use language form appropriately. This approach differed from behaviorist CALL by encouraging learners to think about how they use language. The third approach, integrative CALL, encouraged the use of digital technology, enabling the actual use of language. Soos (2010) and Bulut (2010) suggest that project-based and task-based learning in language teaching is possible through the prudent use of computers. Such approaches are beneficial to learners, as they can enhance their critical thinking and understanding of the language. Another advantage of computers, according to Eqbert and Hanson-Smith (1999), is that CALL is environmentally friendly, as it saves paper. Computers and applications can also ensure privacy and maintain records. Hubbard and Levy (2006) argue that language teachers must understand the class environment, opportunities, and limitations of learning. Proper professional training of language teachers is necessary to ensure that they are not distracted by excessive information but can use it positively. Language teachers should also be aware of current trends and language methodologies. If CALL is not properly managed, it can result in negative consequences instead of giving impetus to language learning (Johnson & Kongrith, 2007).

Integration of Technology

Agreement among the translation scholars that skilled knowledge based systems are required for the translation related task in the class rooms, the study focuses onto the usage of mobile devices for the translation teaching. Further the survey in the study is followed by the Persian and English trainers. Majority of instructors fortified high level students to use mobile during the class rooms for the classroom for notes taking by the means of searching terminologies using internet. The outcomes resulted in the positive impact on the translation tasks and showed the need of technological integration the translation courses (Hossein & Tengku, 2016). From the goals of Global Agenda Sustainable Development Goals (SDG-4) to ensure ample and enduring education for one and all. Current technology enhancement clashes between the traditional and computer-based skilled systems for this connectivity era. The study (Joshi et al., 2024) ensures the effective approaches for adaptability of shift. Further, the study of Adegbile et at. (2003) emphasizes the learning of wireless technologies during the classroom. Furthermore, this study also presented a secured monitoring web-based technology for the students and teachers, this idea solves the challenge of a distractive unsecure environment by providing flexibility to the instructor to control the class resources provided to students, this adaptive idea of e-learning web-based application can boost the performance of students in the classroom. Considering the interactive aim to use of Internet of Things (IoT) provision has been recognized as an imperative indicator for student during class, a study (Ameer et al., 2023), shows students' enjoyment, compatibility, and self-efficacy for learning when using IoT services during the classrooms, further this study emphasis onto the adoption of IoT in classroom settings.

If language teachers use technology to teach English language in ESL classroom, then numerous issues are solved through technology. According to Abbasi et al. (2019) English speech anxiety is prevalent in English language classrooms due to several factors. One key factor contributing to speech anxiety is the English language teacher's high language proficiency and pronunciation level, which can cause new students to feel more anxious. Pakistani English language speakers should strive to speak without anxiety, even though it is natural to feel nervous while speaking English as a second language. Students can learn to manage speech anxiety by embracing it and trying to overcome it naturally rather than

through monotonous imitation. Additionally, academic and social anxieties can directly affect the academic performance of ESL learners, and disrupt their thinking abilities. In the highly competitive twenty-first century, students are striving to achieve better academic results and greater performance. Unfortunately, this can lead to anxiety, which can severely impact their mental health. Many students experience the co-existence of the desire to succeed and the fear of failure. According to the study, students also wish to become socially acceptable, but failing to do so can become a major source of anxiety (Abbasi et al., 2019).

In view of the foresaid situation, ESL learners can be motivated through the use of technology in language learning classroom, Lashari et al. (2018) conducted a study on the motivation behind students learning a target language. The study found that students were mainly driven by external factors to learn the language. These external factors included the desire to secure a good job and pass exams. However, intrinsic factors such as the development of self-image and communication skills in English to improve daily routine work were also found to be motivating factors for students to learn the English language. It is important to note that teacher training in Pakistan is highly stratified, as per Davies and Iqbal (1997). Public schools and colleges offer pre-service teacher training courses for professional development at the tertiary level. However, despite undergoing such training programs, it has been observed that teachers tend to rely on conventional and traditional teaching methods. There could be several reasons for this, such as theory-based content and lecture-based training methods that do not expose trainees to modern teaching methodologies. As a result, many teachers struggle with implementing what they learned during training. Other factors such as power outages, financial issues, lack of communication networks, large class sizes, inadequate facilities and infrastructure, and limited professional development training programs are also major obstacles to effective implementation of CALL.

The integration of technology plays a crucial role in teaching and learning English language. A recent study conducted by Memon et al. (2023) on secondary level education at an elite institute found that Vocabulary Acquisition (VA) taught through CLIL (Content & Language Integrated Learning) was more effective than conventional language teaching of EFL units. CLIL is a popular method of language teaching in Europe and other parts of the world. It focuses on teaching language through subject content, where learners are taught science, geography, history, or physics with a special focus on language structures simultaneously. The study revealed that learners taught through CLIL units achieved greater Vocabulary Acquisition than EFL learners of the target language. Suhag et al. (2017) found that teachers often use old traditional methods, rely completely on textbooks, and don't engage students in projects, group discussions, and activities. The study recommends that teachers should have multiple methods keeping in view of the contents and they should encourage students' participation more in the classroom. Lashari et al. (2018) argue that the study reveals that the students have extrinsic reasons as dominant factors for motivation to learn the target language. The dominant extrinsic factors that were investigated among the students are to get a good job and to qualify exams. The intrinsic factors such as learning English for developing self-image and communication skills in English with proficiency in their daily routine work are responsible for motivating students to learn the English language.

The Computer Assisted Language Learning should be integrated in order to teach and learn various language teaching methods. Mahar et al. (2023) states that the teachers stressed that teacher training programs are not arranged by the management to teach English speaking skills. According to Abbasi et al. (2020), the phonetic and cognitive aspects of communication skills pose challenges for university students in Pakistan. These aspects include pronunciation, grammar, listening, and reading skills, which have been identified as significant techniques to be developed for effective communication. According to

(Hussain et al., 2017) nearly 70% of Pakistani English language learners experience challenges with pronunciation and tense. The study suggests that these problems are caused by a lack of practice, being a non-native speaker, and insufficient attention given to the English language. To improve their speaking, pronunciation, grammar, listening, and reading skills, language learners should seek timely assistance from a language teacher though technology which is an icing on the cake. Abbasi et al. (2023) conducted study on English grammatical morphemes produced by young high school ESL learners, the study concluded that the acquisition order determined, does not fully support the universal acquisition order of English grammatical morphemes of native speakers. If educational technology were utilized the results of the study must have been different. Abbasi et al. (2024) challenges the previous research on Pashto speakers, indicating their proficiency in articulating certain English sounds that were previously considered problematic.

Haßler et al. (2016) examines evidence from 23 studies on tablet use in primary and secondary schools. It highlights the fragmented nature of the knowledge base and the limited rigorous evidence on tablet use in education. Selwyn (2015) thought-provoking book chapter emphasizes the need to critically examine the intersection of technology and education. It highlights issues of inequality, domination, and exploitation related to technology use in education. Gopang et al. (2015) argues that the students of Lasbela University should be motivated to learn English with the altering teaching strategies in classroom, since students were found feeling boredom and lack of interest in old teaching methods.

Additionally, if any EdTech user browses on Google.com for digital applications, the user finds a number of tools are utilized in modern virtual and physical classrooms by the teachers as follows: Technology integration in language teaching refers to the use of technology tools and resources to enhance the teaching and learning process. It can take various forms i.e., online learning platforms provide a virtual space for educators and students to interact, exchange resources, and engage in language learning activities. By integrating audio, video, and interactive content, language learning can become more engaging and effective. Educational games can reinforce vocabulary, grammar, and language skills while maintaining learner motivation. Mobile applications and tools allow learners to practice language skills while on the go. Language-specific apps offer learners access to interactive lessons, exercises, and quizzes, which facilitate language practice and cultural exchange. Digital flashcards are an effective tool to reinforce vocabulary and grammar rules.

In addition to these tools, podcasts, videos, and other multimedia content provide learners with authentic language input. Educational Technology solutions specifically designed for language learning can help create dynamic and effective language learning experiences for students. Social media platforms, such as language exchange groups or language-focused communities, can also facilitate language practice and cultural exchange. Effective integration of technology occurs when it is unobtrusive, easily accessible, and user-friendly. Educators can leverage these tools to create more dynamic and effective language learning experiences for their students. A few popular language learning applications include Quizlet, which provides the ability to create and study flashcards, play games, and take quizzes on various language topics. Pear Deck, a Chrome extension, allows educators to make their Google Slides interactive by incorporating questions, polls, drawings, and audio, with the ability to receive instant feedback from students and peers. Fligrid, a fun app, allows learners to create and share videos with their classmates or pen pals. It provides an opportunity to practice speaking and listening skills, respond to prompts, and provide feedback to others.

Furthermore, Read & Write for Chrome is an effective tool that assists learners with reading and writing in English. It reads text aloud, highlights words, checks spelling and grammar, translates words, and more. Duo-lingo is a popular app that offers short and engaging language learning lessons while allowing learners to track their progress and earn rewards. Voice recorder is a simple app that provides learners with the ability to record their voice to practice their pronunciation, intonation, and fluency, and compare their voice with native speakers or teachers. Quizlet is a tool that allows learners to create and play quizzes on various language topics and access quizzes created by language teachers. It offers a range of question types, including multiple choice, fill in the blank, matching, and more. Finally, Mentimeter is another useful tool that enables learners to create and conduct polls, surveys, and quizzes. It provides a way to gather feedback, opinions, or knowledge from their peers and display results in real-time using charts, word clouds, and images. By incorporating these tools into their teaching strategies, instructors can enhance the language learning experience for their students.

Significance of the Study

The present study aims to conduct a survey research design to determine the attitudes of English language instructors and the administrators employed at Public colleges in Karachi, Pakistan, towards Computer-Assisted Language Learning and implementation of the associated training programs. The results of this study will aid in identifying the need for EdTech training programs and motivating language teachers. Additionally, this study will assist policymakers in launching initiatives and raising funds to support CALL programs at the school and college levels. Such initiatives will further identify the concerns, problems, and expectations of college English educators about the training courses, enabling the administration and the trainers to implement effective EdTech courses.

METHODOLOGY

A survey research design was adopted, based on purposive sampling technique. The sample size consists of 26 English language teachers from different Public colleges in Karachi, and 6 principals of the degree colleges in focus-group for thematic analysis were interviewed.

Sampling and Procedure

After signing a consent form to participate in the current study, twenty-six teachers (*N=26*), including seven females (*n=7*) and nineteen male teachers (*n=19*), were asked to fill out a questionnaire. The questionnaire consists of four sections as follows: The Section A was regarding demographic information including their names, age, sex, and the names of the colleges they work, and their teaching experience and knowledge of prior computer literacy. The Section B included thirteen Likert scale questions to investigate English teachers' perceptions on CALL. The Section C included thirteen Likert scale questions to investigate digital facilities and trainings provided by the college and Public. The Section D consisted of six open-ended questions for the principals. The first two questions were about their prior knowledge or training in CALL, the third and fourth questions were about their readiness and willingness to support digital learning and teaching or provide EdTech trainings, and the last two questions were about the extent to which college administration provides sufficient techno-facilities and the Public supports it and makes computer training possible. Some of the questionnaires were filled out in presence of them, whereas, others were sent and responded through their official electronic mails. Four out of six principals responded in black and white whereas two of them recorded their responses.

Validity and Reliability

They collected, processed, and methodically analyzed the data to guarantee the validity of the study. A comprehensive research strategy was used for the literature review to ensure that all relevant papers were included. They analyzed the data systematically and openly, employing codes and categories to organize it through the Likert Scale and find patterns

and concepts. They also triangulated the data by referencing numerous sources to back up their findings. In addition, to ensure the study's credibility, they thoroughly recorded the research process and offered a clear, detailed description of the data collection, treatment, and analysis protocols. They also used a systematic approach to data analysis, employing categories to arrange the data properly.

RESULTS AND DISCUSSION

The survey questionnaire revealed some interesting data. One notable observation is that all respondents had at least two years of teaching experience and were university graduates, as this is the requirement to attempt through transparent Sindh Public Service Commission Competitive Examination and interview for the lecturer positions at Public colleges in Sindh. In the first section of the questionnaire, all respondents indicated that they are computer literate and proficient in using MS Office. The second section of the questionnaire contained thirteen multiple choice questions, which primarily focused on assessing the readiness of teachers and their level of computer efficiency. Figure 1 illustrates the core statement about the respondents' excitement in utilizing CALL.

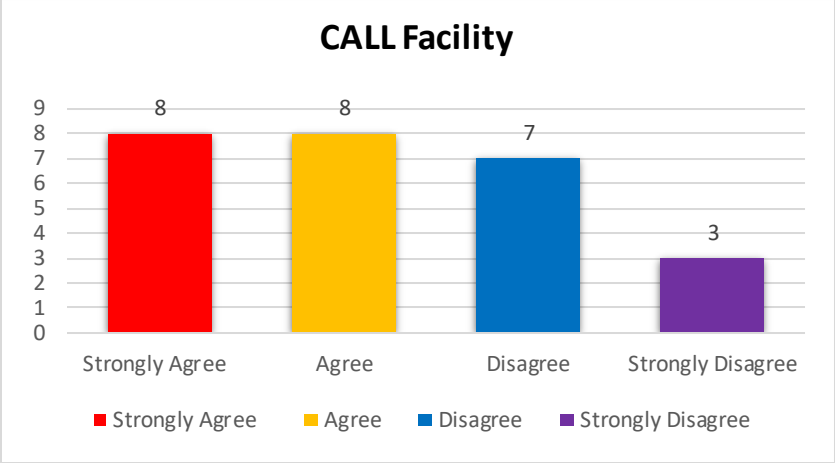

Figure 1. All teachers are excited to use CALL in language teaching.

The following is a summary of the responses received to the study on Computer Assisted Language Learning (CALL).

Question 1: Did you know about CALL before taking this survey?

- Fourteen percent respondents strongly agreed that they knew about CALL, 12 agreed, and none disagreed or strongly disagreed.
- Fifty-four percent strongly agreed that they knew about CALL, and 46% agreed.

Question 2: Do you want to receive CALL training?
- Fifty-seven percent of English teachers strongly agreed, 42% agreed, and none disagreed or strongly disagreed.

Question 3: Do you disagree with the statement "Learning CALL is a waste of time"?
- Nineteen percent disagreed, and none strongly disagreed.
- Thirty-eight percent strongly agreed, and 42% agreed.

Question 4: Do you use YouTube and other internet resources to learn CALL?
- Twenty-eight percent strongly agreed, 30% agreed, 30% disagreed, and only 9% strongly disagreed.

Question 5: Does your college administration help you use CALL?

- Twenty percent strongly agreed, 30% agreed, 38% disagreed, and only 9% strongly disagreed.
Question 6: Will you join CALL trainings if your college administration offered them?
- Hundred percent agreed, and none disagreed.

Question 7: Do you have any CALL-related mobile apps on your smartphone?
- Seventy-three percent agreed, and 37% disagreed.

Question 8: How aware are you of other internet sources related to CALL?
- Thirty-four percent do not have any related apps installed on their mobile phones, and 66% do.

Question 9: How excited are you about CALL trainings?
- Sixty-one percent are excited, and 39% are not.

Furthermore, the participants were asked a series of questions related to their perceptions of using Computer-Assisted Language Learning (CALL). The tenth question asked if they believed that CALL would make teaching and learning easier. The data shows that only 11.5% did not think that it will make teaching and learning easier, while the rest, i.e. 88.5%, agreed with the idea.

The next question was about whether they agreed with frequent CALL-related training. Here, only one respondent (approximately 4%) disagreed, while the remaining 96% showed interest in frequent CALL training.

The twelfth question asked if all language skills could be taught using CALL. In response, 15% disagreed, while the remaining 85% agreed with the idea.

The last, thirteenth question asked if they expected good results from learners if taught using CALL. The data shows that only 4% disagreed, while the remaining 96% agreed that it will yield very good academic results for learners. Figure 2 illustrates the use of multimedia facility at the colleges.

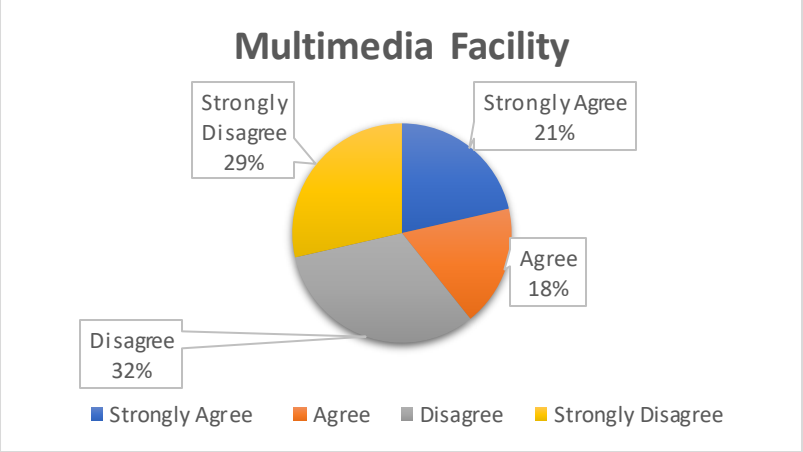

Figure 2. Core Statement: We have multimedia facility at our college.

According to the investigation conducted among college teachers, the responses to the C section were as follows:

The first question was whether all of them had computers, to which 100% of the respondents answered yes. Seventy-seven percent had laptops, and all the teachers had smartphones. Eighty-five percent of them had all three devices.

The fifth question revealed that 30% of the respondents did not have internet connectivity all the time, while 70% answered positively to this question. Thirty-five percent did not have internet connectivity at their homes, thus 65% should have it.

Fifty-four percent of the respondents did not have internet facilities both at their offices and homes. Fifty percent of the people had alternatives to power supply at their offices. Whereas, fifty-eight percent did not have alternatives to power supply both at offices and homes.

Sixty-five percent of the respondents did not have alternative power supply and internet facilities both at their homes and offices. Similarly, 65% of the respondents did not have multimedia facilities at their college classrooms, while only 35% had them.

Only 4% or one respondent said they had digital boards in their classrooms, while the remaining respondents did not have this facility. Only 4 respondents i.e., 15% had IT officers at the colleges, which means that 96% of the respondents indicated that there are no IT officers at their colleges.

Section D: There were open-ended queries as follows:

1. What are your comments about CALL?

   As an open-ended answer to this question, the principals replied positively that they will like if CALL is integrated in teaching methods at colleges provided they are facilitated by the Public. They showed positive interest in CALL.

2. Have you ever done any training of CALL?

   Only three college principals agreed that they really had any CALL training, this shows that 50% of them did not have done any CALL training. This shows less Publical reach as far as CALL training is concerned.

3. How much do you agree that teaching with CALL will be beneficial to language learning?

Almost all of the college principals were of the view that over all teaching will be beneficial if CALL methods and applications are integrated into their teaching strategies and approaches. Thus, it shows positive stance of them.

4. CALL actually makes teaching easier, do you agree?

Again to this, question almost all of them were of the opinion that CALL will make college teaching very easier as compared to conventional and traditional methods of teaching. This will reduce extra time and energy. Few of them also pointed out that CALL will minimize paper work and it will be good for privacy and record keeping. Figure 3 illustrates core statement regarding language skills.

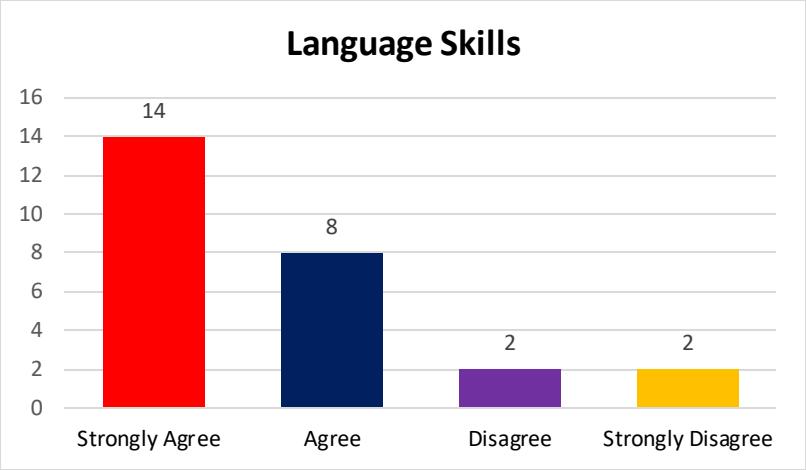

Figure 3. Core Statement: All language skills can be best taught using CALL

5. Are there any CALL facilities at your college?
Five out six college principals said that there were no CALL facilities at their colleges, despite many claims by provincial Publics and federal Publics that they had been trying best to facilitate colleges with these facilities and resources. But this research shows that there were no such facilities.

6. Do you expect any Public support for CALL trainings at your college?
The views to this question was very interesting as fifty percent college principals were hopeful that Public will surely reach and extend its support and funding for not only resources but also for teacher trainings. They expected Public to enhance its policy regarding the implementation of CALL in teaching and learning of English language.

The Public colleges need to be improving the education sector in Sindh by enhancing the Computer Assisted Language Learning (CALL) environment and providing more facilities in each Public college in Karachi. It has provided computers in Public colleges, and computer education is now part of the curriculum however, Pakistani teachers lack the expertise required for CALL training. To address this, a CALL subcommittee was formed by the Higher Education Commission of Pakistan and the English Language Reform program in 2004. The subcommittee trained 107 language teachers, including 13 master trainers for Integrative CALL. However, this is still not enough, and more training sessions are needed to improve the language teaching skills of teachers in Pakistan. English language teachers in Pakistan have limited knowledge in teaching, subject areas, and computer skills. Therefore, there is a need to increase the number of trainees and equip teachers with the necessary CALL skills. Language teachers must be competent in the target language, language instruction, and computer expertise to integrate CALL effectively. However, normally the teachers tend to use computers and its application less in the ESL classroom because of less familiarity with educational tools utilized.

CONCLUSION

According to the study, technological integration can improve students' language learning experiences and outcomes while increasing instructor productivity and motivation. It also suggests that policymakers establish and fund CALL programs and trainings at the college level, and that teachers improve technological skills awareness for teaching and learning. According to the current research, the majority of college English language professors are computer proficient and can use MS Office. This viewpoint was formed based on the first section of the survey questionnaire, which included basic information questions. The second section of the questionnaire asked about teachers' attitudes about technology use, and it revealed that the majority of them had heard of it and had an idea about it.

The second segment focused on CALL facilities and training for college teachers. The study also looked into administrative support financing for not only training, but also the provision and availability of CALL materials. The findings of this section revealed that the majority of college teachers had access to computers, smartphones, and laptops. However, the bulk of them experienced problems with electricity supply. A severe problem was also noticed with the limited availability of CALL facilities at colleges. Only one college employed an IT officer. The administration/public, not the teachers, is clearly deficient. They are more successful in providing enough training, resources, and infrastructure for integrating EdTech into the teaching and learning of English language at colleges in Karachi.

Interestingly, many were enthusiastic about EdTech training provided by college officials or the government. More than 60% of college English teachers agreed to pay for CALL training. Many respondents said they use YouTube and other internet resources to integrate digital applications into their lessons. They thought that using EdTech would facilitate teaching and benefit both students and teachers. They anticipated that the technological revolution would allow learners to improve their language abilities more swiftly and readily, resulting in academic success. This study has limitations because it only looked at seven colleges in Karachi. More participation and comparable studies across the country would provide significant insights for improving EdTech-based curricula and policy.

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