

An Effective Online Collaborative Training in Developing Listening Comprehension Skills

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Abstract: The COVID-19 outbreak severely affected formal face-to-face classroom teaching and learning. ICT-based online education and training can be a useful measure during the pandemic. In the Pakistani educational context, the use of ICT-based online training is generally sporadic and often unavailable, especially for developing English-language instructors' listening comprehension skills. The major factors affecting availability include insufficient IT resources and infrastructure, a lack of proper online training for speech and listening, instructors with inadequate academic backgrounds, and an unfavorable environment for ICT-based training for listening comprehension. This study evaluated the effectiveness of ICT-based training for developing secondary-level English-language instructors' listening comprehension skills. To this end, collaborative online training was undertaken using random sampling. Specifically, 60 private-school instructors in Chakwal District, Pakistan, were randomly selected to receive online-listening training sessions using English dialogs. The experimental group achieved significant scores in the posttest analysis. Specifically, there were substantial improvements in the participants' listening skills via online training. Given the unavailability of face-to-face learning during COVID-19, this study recommends using ICT-based online training to enhance listening comprehension skills. Education policymakers should revise curricula based on online teaching methods and modules.

Keywords: COVID-19; online training; remote teaching; computers in education; listening comprehension; English language

1 Introduction

The novel coronavirus (COVID-19) was first detected in Wuhan, China, and it subsequently spread to other parts of the world in early 2020 [1]. The World Health Organization (WHO) declared a public health



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emergency on January 30, 2020. Pakistan saw a massive outbreak of COVID-19, with 554,474 confirmed infections and 11,967 deaths reported as of February 7, 2021. WHO recommended social distancing to control the spread of the virus [2]. In that context, WHO also recommended adopting remote learning as a substitute for in-person instruction [3].

The optimization of instructional methods for the learning and teaching of language has long been an active area of research [4]. The research focus has shifted from traditional face-to-face teaching to online learning, which gives learners opportunities to practice and learn in many different ways [5]. The use of online teaching during COVID-19 helps people to continue to learn and avoids suspending formal education [6,7].

A major problem with online learning in Pakistan is the unavailability of infrastructure, especially modern IT facilities and audiovisual aids. Further, the government has adverse policies that hinder online learning adoption. Moreover, curricula have significant loopholes that hinder English-language education, especially with regard to listening comprehension. Other obstacles include a shortage of English-language instructors at institutions (especially in remote areas), a lack of proper training for English instructors, and ineffective traditional examination styles [8].

In Pakistan, English has mostly been taught in the traditional classroom style, emphasizing grammar-focused reading, writing, and speaking. Meanwhile, listening comprehension is considered a complex process because it involves linguistic knowledge (i.e., grammar and vocabulary) as well as nonlinguistic knowledge (i.e., learning about objects/articles) [9].

Pakistan's education system derives from the system developed under British colonial rule [10]. After independence, English-medium education flourished, largely benefitting children from the elite classes [11]. English instruction at Pakistani schools has mostly focused on face-to-face classroom teaching. Generally, children's English-language proficiency remains very poor, especially with regard to listening comprehension. Reasons for this include the insufficient educational backgrounds of instructors, biased attitudes among instructors, parental behaviors, a lack of proper infrastructure, and loopholes in curricula.

The suspension of formal classroom teaching as a result of COVID-19 has compounded such problems in Pakistan. Given such hurdles, the present study focused on ways to develop English-language listening comprehension using collaborative online training sessions that involve practicing English dialogs. This study makes the following contributions: (1) In the COVID-19 context, where face-to-face training is not feasible, it validates the usefulness of ICT-based collaborative online training for improving the listening comprehension skills of English-language instructors. (2) It identifies the essential factors affecting the low listening comprehension of English-language instructors. Lastly, (3) it proposes effective solutions by correlating collaborative online training with enhanced listening comprehension skills.

The rest of this paper is organized as follows. Section 2 reviews the literature while Section 3 describes the proposed method of ICT-based collaborative online training. Section 4 presents the pretest and posttest results, and Section 5 concludes.

2 Literature Review

There is a lack of recent literature on developing the listening comprehension skills of secondary school English-language instructors using online training. Here, we present the existing issues and challenges involved in developing such skills among English-language instructors.

The traditional teaching of English as a second language has mainly emphasized reading, writing, speaking, and vocabulary [12]. Listening comprehension, however, is a neglected area. This requires attention since English is generally considered a difficult language to comprehend.

In Pakistan, after independence, the quality of instruction at elite English-language schools was considered significantly better than traditional instruction in Urdu schools [13]. Give the success of these English-medium schools, many new private English-medium schools were opened, attracting large numbers of students.

While the medium of instruction at these private schools was English, Urdu was used in parallel to facilitate children's comprehension of teachers. The motivational factors as well as proper training are mostly missing from Pakistani English-language curricula and teaching methods [14]. This makes students feel anxious and confused about learning English, and they are not sufficiently focused on the listening comprehension component. That study recommended revising the curriculum to include sufficient training exercises related to listening comprehension. Yet, students graduated from these schools with insufficient knowledge of English, and those students were ultimately appointed to teach English at similar private schools [15]. This is the background of the various challenges facing English-language instruction in Pakistan. Even at excellent English-medium schools, listening comprehension remains neglected. Thus, weak English-language listening comprehension continues to be perpetuated.

There are several issues underlying English-language teachers' inability to teach and assess listening skills. University students commonly fail to enhance their English-language skills while at the undergraduate level [16]. Improving listening comprehension requires an enormous amount of practice [17,18] identified the challenges of learning English as a second language for intermediate students in Bhakkar and Mianwali. English is taught as a compulsory subject in Pakistani institutions. Yet, the failure rate of students in the subject of English is very high. This study also found that most Pakistani institutions taught English in a classic style, focusing on memorizing vocabulary with a soft focus on reading and writing. Meanwhile, listening comprehension is absent, posing serious obstacles for students' comprehension of English. Similarly, [19] also highlighted challenges related to English-language instruction in Pakistan based on a historical overview of government policies, educational policies, and curriculum development.

One important factor is that different curricula are taught at different Pakistani institutions. Private schools in Pakistan typically have better English-language curricula. Public schools, however, do not have the resources to effectively teach English-language comprehension [20]. As a result of such diverse curricula, students and parents are often confused about which curriculum they should follow to effectively learn English. Another major issue is the unavailability of proper training and guidance for developing the cognitive skills students need to effectively learn, speak, and understand English.

Students in Pakistan experience anxiety while learning English listening comprehension because they do not feel confident enough to communicate using English. Thus, their listening comprehension is generally inadequate. Thus, there is a need for teachers need to adequately train students to develop and enhance their listening comprehension. Teachers should motivate learners of English in a way that will remove obstacles that hinder their listening comprehension. Teachers' attitudes play a crucial role in students' learning. Thus, English-language teachers need to help students feel confident enough to practice listening exercises and thereby improve their performance.

A study by the present authors found that Bahawalpur students faced similar difficulties speaking and understanding English; most had inadequate listening comprehension [21]. Most students were taught using curricula that largely lacked listening comprehension. The teachers also lacked a sufficient understanding of English and therefore could not adequately teach students to understand English and speak without hesitation. It is recommended, therefore, that students should receive proper training in English-language listening comprehension to improve their ability to communicate in English.

Teachers should identify the challenges related to speaking and understanding English to enhance the benefit they provide to learners. Specifically, teachers should involve students in different listening comprehension activities to build their cognitive skills. Various types of training sessions and activities can help learners develop their listening skills.

Pakistani students also need adequate exposure to English to enhance their listening and speaking skills. Institutions should provide a positive environment for students to openly communicate using English. Language barriers can be reduced by giving students suitable and diverse training sessions to develop their listening skills. Such changes in curricula and in institutional environments will greatly help students practice speaking and listening to English, and thereby improve their listening comprehension.

3 Method

This study aimed to measure the effectiveness of ICT-based online training to develop participants' listening comprehension skills. In this way, we hope to encourage educators and policymakers to transition from face-to-face learning to collaborative online learning models. We used the Google Meet application for online training sessions and evaluated participants' performance using a pretest/posttest experimental/control group design [22].

$R \rightarrow T_1 \rightarrow P_1 \rightarrow T_2$ (Treatment of control group through traditional method)

$R \rightarrow T_1 \rightarrow P_2 \rightarrow T_2$ (Treatment of experimental group through training)

where:

R = Random assignment of samples into controlled and experimental groups

T_1 = Pre-test

T_2 = Post-test

P_1 = Treatment of controlled group through traditional method

P_2 = Treatment of experimental group through training to enhance listening comprehension skills

Further, [Tab. 1](#) shows the research design.

Table 1: Research design

Population	Sample	Groups	Measurement	Comparison
Instructors of private schools of District Chakwal	Sixty randomly selected instructors of English medium private schools	Controlled Group (A) Experimental Groups (B)	Pre-test Post-test	Compare results of A and B to conclude the significance achieved

Before conducting the pretest and posttest, we gathered the perceptions of the participating instructors to grasp their existing listening skills and the degree of training they should receive. For homogeneity, the population consisted of instructors aged 30–35 teaching at the secondary level; all had a bachelor's degree. We interviewed the participants online and analyzed their English-language comprehension competency. We randomly took six instructors from each school. To maintain homogeneity in the sample, the selected candidates had similarly low proficiency in English listening comprehension. They belonged to middle-class families, and they had five months to two years of teaching experience.

The design of the research instrument required an understanding of the needs of English instructors, their teaching/learning attitudes, and their efforts toward self-improvement. Before designing the research instrument, data related to teaching practice and lessons were obtained. Feedback from the instructors was collected in the form of task sheets with the help of online notes maintained by the researchers. Further, information about the pretest and posttest was also made available throughout the study. The instrument was administered as a pretest to allocate candidates into control and experimental groups. Further, after

giving full training sessions to the candidates, the tool was again applied to both groups to observe any significant achievement attained from the listening training.

The following factors contributed to enhancing the reliability of the research instrument:

- a) The primary objective of the study was to improve listening comprehension skills.
- b) We aimed to estimate the instructors' attitudes toward online learning.
- c) We aimed to grasp the perceptions of instructors regarding self-learning.

The research instrument was discussed with experts in the field before designing and implementing the study. We also reviewed many sample audio dialogs from the BBC and Cambridge IELTS (<https://www.teachingenglish.org.uk/dialogs>). We finalized the audio dialog kit containing the training session and discussed it with language experts. Their comments and feedback were incorporated into the design.

A prototype of the instrument was administered to a group of randomly selected candidates as a pilot test to determine its reliability, which was assessed based on Cronbach's alpha scale reliability test [23]. Tab. 2 shows the reliability statistics.

Table 2: Reliability of instrument

Cronbach's Alpha	No. of items
0.739	25

Reliability was found to be 0.739, which is significantly higher than the standard of 0.5, reflecting the authenticity of the instrument's content. Based on the pilot assessment, some relatively easy or very difficult items were replaced. The same candidates from the pilot assessment were again given the prototype instrument. They were reassessed to further validate reliability.

The research instrument was validated multiple times through online discussions with three top experts in the field. The experts provided meaningful feedback regarding the instrument's quality, the avoidance of repeating or looping items, replacing low-standard items with high-standard items, and rephrasing specific wording. After several revisions, the items were finalized. Based on the experts' recommendations, the following changes were made:

- a) The format of the questions and the style of asking the questions were redesigned.
- b) Line spacing and fonts were modified.
- c) The instructions were made more explicit.
- d) Some open-ended questions were supplemented with multiple-choice questions.

In addition, we reviewed several EFL/ESL tests before developing the format and style of the experiments. The following ethical measures were implemented during the sessions:

- The participants were allowed to speak at their turn.
- No participant was allowed to laugh at or make remarks about someone else's mistakes.
- Participants helped each other keep in mind that was meant to be a learning experience.
- Everyone shared their own experiences.
- Constructive criticism was accepted, and nothing was taken personally.
- Everyone used headphones during while listening to English dialogs.
- No one was allowed to speak in their native language during the training.

- The research team maintained confidentiality, and no one was allowed to discuss a participant's weaknesses with another person (outside the research team).

4 Results and Discussion

An inferential analysis of the participants was performed using pretests in control and experimental groups to determine the participants' skill levels before training. The study recorded 30 observations for the inferential analysis of participants' behaviors before the training.

We hypothesized that participants in the experimental group who received listening training would perform significantly better in the posttest than participants in the control group. The researchers considered two hypotheses for inferential analysis. The first is the null hypothesis H_0 ($\mu_2 - \mu_1 = 0$): There will be no statistical significance in the results between participants in the control group (with no listening) and the experimental group (with listening training); or, there will be no statistical significance between participants in the control and experimental groups, and the training will not enhance the listening skills of participants in the experimental group. The other is Hypothesis 1 (H_1) ($\mu_2 - \mu_1 > 0$): There will be a statistically significant relationship between participants in the control and experimental groups, and the training will enhance the listening skills of participants in the experimental group. μ_1 is the sample mean of the data in the pretest, and μ_2 is the sample mean of the data in the posttest. It was observed that listening comprehension was correlated with the listener's social interaction with the teacher and with the environment in which the listener exercises his or her cognitive skills and applies them to acquire skills.

Fig. 1 shows the study procedure. The experimental group received listening training while the control group did not.

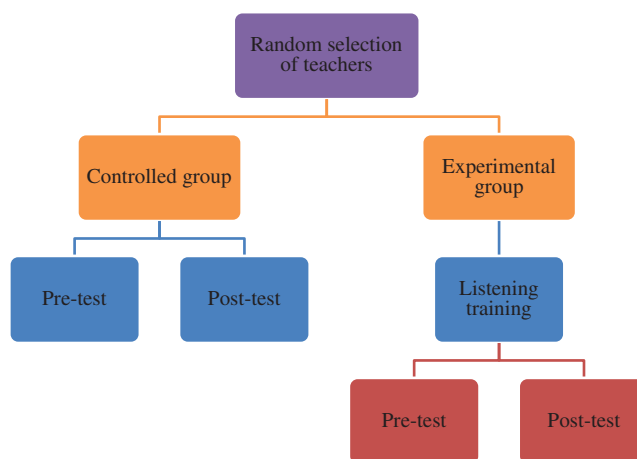


Figure 1: Procedure of study

A pretest was given to the teachers in both groups to analyze their existing listening skills. Different dialogs were played to check the teachers' listening comprehension using a tape recorder.

The identified weak areas in the participants' listening comprehension were compared with the posttest results. Mistakes and deficiencies in the listening skills of the teachers were noted, and averages and percentages were calculated. After analyzing the weak areas in their listening skills, a listening module was used to provide 30 hours (two hours per day) of listening practice to the experimental group (A, B, C, D, E) in a special training course.

Pretest and posttest data were analyzed using table and bar graphs. The control group did not receive any training. A posttest was given to both groups, and the results were compared. A significant improvement was seen in the posttests of the experimental group while the performance of the control group remained almost the same. For this quantitative research, we calculated *paired two-sample means* and *independent-sample means*. [Tab. 3](#) presents the t-test statistics for the control and experimental groups.

Table 3: Paired two sample for means t-test on pre-test and post-test data for controlled and experimental groups

Instructional Group	<i>N</i>	<i>Means</i>	<i>SD</i>	<i>Std. Error</i>	<i>df</i>	<i>t-value</i>	<i>Sig.</i>
Controlled Group (Pre-test)	30	14.966	4.147	0.757	29	0.402	0.345
Controlled Group (Post-test)	30	15.033	4.230	0.772	29		
Experimental Group (Pre-test)	30	16.2	3.907	0.713	29	11.995	<0.01
Experimental Group (Post-test)	30	24.8	4.302	0.785	29		

In the table, we can observe that the p-values are 0.345 and <0.01 for the control and experimental groups, respectively. The p-value for the control group is much higher than the chosen 95% confidence interval (i.e., $p > 0.05$). This implies that our null hypothesis is not rejected. No statistically significant difference can be observed in the pretest and posttest performance of participants in the control group. On the contrary, for the experimental group, the p-value is lower than the confidence interval, which implies that the null hypothesis was rejected, and statistically significant difference can be observed. Further, the independent-sample t-test for the pretest data of the control and experimental groups was calculated as shown below.

[Tab. 4](#) presents t-test statistics (independent samples) for the pretest and posttest data for the control and experimental groups. In the control group, the p-value is 0.462, which is remarkably higher than the chosen 95% confidence interval (i.e., $p > 0.05$). This implies that the null hypothesis is not rejected, and no statistically significant difference can be observed in the performance measured by the pretests for the control and experimental groups. On the contrary, for the experimental group, we find that the p-value is 0.000, which is remarkably lower than the t-critical value (i.e., $p < 0.05$). This implies that the null hypothesis is rejected, and a statistically significant difference can be observed in the performance measured in the posttests of the control and experimental groups.

Table 4: Independent samples t-test on pre-test and post-test data of controlled and experimental groups, respectively

Instructional Group	<i>n</i>	<i>Means</i>	<i>SD</i>	<i>Std. Error</i>	<i>df</i>	<i>t-value</i>	<i>Sig.</i>
Controlled Group (Pre-test)	30	14.966	3.868	0.706	57	0.095	0.462
Experimental Group (Pre-test)	30	15.066	3.881	0.708	57		
Controlled Group (Post-test)	30	15.033	5.477	0.713	57	8.86	<0.01
Experimental Group (Post-test)	30	24.8	5.477	0.785	57		

Comparing the pretest and posttest results, a highly significant improvement was observed in the experimental group's speaking skills. By contrast, the control group did not show any significant change. Noticeable improvements were seen in the experimental group's pronunciation, question-based comprehension, understanding of language structure, and vocabulary.

Fig. 2 depicts the two groups' competencies before the training. We can see that both groups had a similar level of competency. Our initial evaluations showed that the control and experimental groups had almost the same mean in the two observation sets. Hence, before the training sessions, the performance of both groups was comparable.

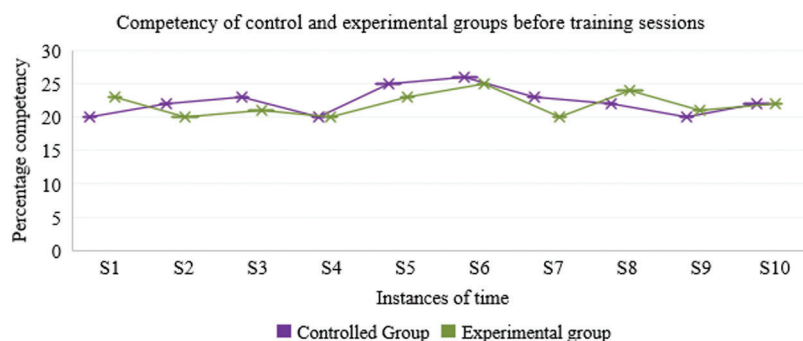


Figure 2: Competency of control and experimental groups before training sessions

Fig. 3 shows the effects of the training sessions on the experimental group. There are clear differences in the performances, with the experimental group outperforming the control group. Thus, the online training had highly satisfactory results. We observed that after the training, the instructors started communicating with each other in English. Moreover, when the participants received at-home assignments, such as listening to the news, watching English movies, or listening to English stories online, they did so happily and came prepared the next day.

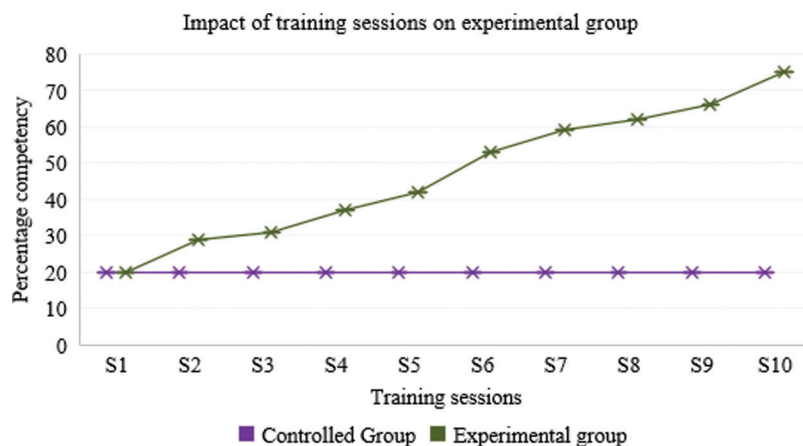


Figure 3: Impact of training sessions on competency experimental group

This study's findings can offer some recommendations for improving the listening skills of English-language instructors. They include the following:

- All basic language skills should receive equal emphasis in English-language teaching; these four skills (i.e., reading, writing, listening, and speaking) are the main pillars of language building.
- Proper training to improve listening skills through audio dialogs should be included when designing curricula.

- Improving English-language instructors' listening skills through audio dialogs should be a part of their training.
- Schools should have well-equipped language labs where formal listening sessions can be given to English-language instructors so they can provide the same to their students.
- At the primary level, language labs in the private and public sectors can be developed to improve the listening skills of instructors as well as students.
- This study's results can be applied to the functional English curricula at the intermediate and graduate levels.
- English listening modules and courses can be developed to improve neglected areas (i.e., listening and speaking).

5 Conclusion

The spread of COVID-19 resulted in the suspension of educational activities in Pakistan. In this context, this study employed an ICT-based online training program to explore the competency of English-language instructors in Chakwal District, Pakistan, especially in terms of listening comprehension and speaking. This study confirmed the importance of offering online training to instructors to enhance their listening comprehension skills. The p-values of all posttest measurements for the experimental group were below the confidence interval (0.05), indicating that the participants had excellent scores. We recommend that educational policymakers focus on adopting remote-learning measures to improve the listening skills of instructors at English-medium schools.

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