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Effectiveness of self -developed multimedia package tool's influence on listening skill acquisition among integrated B.Sc B.Ed students in higher education

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Abstract---In these days, Higher Education of India (HEI) has more requisite to shift from face to face to virtual learning through online because of COVID-19 pandemic situation. Listening skill was neglected which was one of the main source to acquire the knowledge from different medium of e-learning platform by delivering several lectures on social media. It is True experimental research design (before and after with control group design). Random sampling was applied to identify the groups and treatment has been given to one of two groups is called experimental group. The investigator kept experimental study well without mutual contacts and interaction between two groups. Post-test was administered on two groups after treatment completed then the result of pre-test and post-test compared then paired t test value is 13.22 .It is higher than p value at the 0.05 level so null hypotheses is rejected. The findings are there was statistically significant difference between experimental and control group regarding acquisition of listening skill by influence of multimedia package tool and there was significance among integrated bsc,bed students on higher education regarding effectiveness of multimedia package tool.

Keywords---multimedia package tool, COVID-19, listening skill, e-learning.

Introduction

(Dr. Pankaj, 2020) said that “high quality open source educational learning resources in various Indian languages should be developed” This statement explained about the requirement of online platform like e-learning platform to face several challenges for sustainable development and quality in higher education especially during unexpected pandemic situation raised. It is not possible to expect the teaching learning process happen without interaction whether through face to face or online mode. The pandemic situation made self-awareness and realization about technical infrastructure, blended learning and mixing synchronous learning tools which allowed live classroom for distance learners.

More importance should be given to listening activities among all language skills primarily because students are motivated and stimulated to think for constructing knowledge by their imagination through listening activities. Students are facing difficulties in the field of acquisition listening skill because of lack of concentration, recalling and responding and listeners are not active with different pronunciation, stress and rhythm. Listening skill acts key role in phone interview, team world and to make effective communication. Students after completed higher education, listening skill is very useful for their career perspective and especially helpful for B.Sc B.Ed students they need to develop listening skill to get more knowledge, comprehensive and other competencies in their professional life.

(MESKILL, 1996) Stated that multimedia involves integration of text, graphics, audio and motion videos enhance listening skill. Many studies revealed that listening and technology is very good combination to promote abilities of communication skill and applications of language and technology and to produce many other useful e-learning platform like CALL (computer aided language learning) MALL (mobile aided language learning) and RALL (robot assisted language learning).

Why students feel hard to acquisition of listening skill

(A.Madhavi, 2018) Most of the educational institutions did not provide adequate time and facilities like language laboratories which dedicated to allow for foreign language learning. Language labs are placed for audio video material which are accessed by students individually through headsets in sound booth and practice of listening skill is given less importance in language class due to lack of experts and special trainers. Language teachers hardly give attention for listening skill due to heavy load on syllabus. Many students felt difficulties particularly to understand the foreign accent, gestures and activities of listening skill are not attracted to make them active listeners from passive listeners. Sometimes they forgot what they heard because they are not able to get sustained attention at speaker moreover listening skill contain complexity in the process of response to the speaker. Some of the attitudinal barriers and physical barriers acts main role in listening skill to distract the effective communication.

Review of related literature

The related literature in the field of listening skill enhanced by the use of multimedia

(Sejdiu, 2017) tested on “Are Listening Skills Best Enhanced Through the use of Multimedia Technology” It is a quasi-experimental design. It aimed at comparing the extent of utilization of multimedia facilities in the development of listening comprehension among students. The main hypothesis of this study was there is statistically significant difference before and after the course of MMB instruction for teaching L2 listening comprehension in primary schools. The sample included only primary school students enrolled in two separate English classes and sample consisted of 50 children aged from 9 to 10 years old and students are selected voluntarily for this research study received informed consent from them and their parents. During experimentation control group received teaching by an ELT and experimental group instruction from the researcher. Data collection took place in each of the three stages: pre-intervention testing, intervention, and post intervention testing. Data analysis was carried out for three sets of statistical data. The researcher studied variances of pre-test and post-test results for each group and compared them. The mean score of the group showed only a 2.4% progress from the pre-test to the post-test assessment. This slight improvement in listening comprehension skills is a logical outcome of a systematic learning process targeting this skill.

The related literature in the field of multimedia in teaching listening

(Ben djaballah, 2013) Conducted study on “Implementing Multimedia in Teaching Listening Comprehension” a PhD thesis submitted to Mohamed kheider University of Biskra. The purpose of this study was to examine the hypothesis was if teachers neglect the use of multimedia while teaching L2 listening then learners will face difficulties in comprehending the target language. The research question of this study was “How can multimedia improve learners” proficiency in understanding the oral discourses? The investigator chosen descriptive method and they gathered data from three research tools they are teachers” - questionnaire, classroom observation, and unstructured interviews. Our sample composed of fifteen teachers of oral expression at Biskra University, and second year LMD students with whom they conducted their classroom observation. It was a qualitative study that is based on descriptive method .The objective of the study was to provide a general description of their study. Also we have chosen this method because the allocated time is insufficient to conduct an experimental study. Percentage was used to analyze the statistical data and to interpret this study. The investigator concluded that the present study purposes to find out radical solutions to the problem by implementing multimedia as an effective strategy to improve learners” performance in this aural skill.

The related literature in the field of the effectiveness of multimedia based learning program on students listening skills

(Shereen Hamed, 2013) The study aimed at investigating the effectiveness of a multimedia based learning program on developing seventh graders' listening

comprehension skills and attitudes in Gaza governorate. The investigator aimed that four language skill and the researcher selected a representative sample of 86 EFL female students studying at Al Mamounja Prep girl's school which is run by UNRWA in the Gaza strip. The participants were divided into two equal groups: a control group, 43 students and an experimental one, 43 students. The instruments were, an achievement test, an attitude scale and an interview. The achievement test was used as a pre-test to prove groups equivalence. Moreover, it was used as a post test to measure any possible differences between the target groups. The findings revealed that there were statistically significant differences between both groups, in favor of the experimental one, in understanding the main idea, pointing out specific details, deducing meaning of unfamiliar lexical items from the listening text and inferring the moral lesson of the listening text due to the program implemented. The results revealed that the program had a large effect size in favor of the experimental group. Based on the results of the study the investigator recommended the necessity of implementing multimedia program in teaching English listening comprehension.

The related literature in the field of the effectiveness of multimedia application on students listening

(Tagor, Andromeda, & Kammer, 2017) conducted a study on the effectiveness of multimedia application on students listening comprehension, the purpose of the study was to find out the effect of multimedia application on student's listening, the research design was experimental with a t- test. The sample consist of six classes of listening comprehension, 3 classes for experiments and the other for control, each class of 20 students of the sixth semester of HKBP Nommensen University. The findings states that the $T_{cal} = 14.68 > T_{table} = 2.02$ in a significance 0.05 and degree of freedom 38. It means that, multimedia application is effective than conventional media. Finally, the result of observation says that use of multimedia to enhance and to help facilitate inputs for the listening and to give time to accommodate new-old information strategy to enhance the process of listening comprehension capacity and acquisition.

Objective of this study

- To develop listening skills through the multimedia package tool among integrated B.Sc B.Ed students in higher education.
- To study the effectiveness of multimedia package tool in terms of students' achievement in listening skills.
- To find out whether there is any significant differences in the mean achievement score between the post-test of the control group and the post-test of the Experimental group.

Hypothesis of this study

- H_0 : There is no significant difference in the achievement mean between pre-test of the control group and pre-test of the experimental group.
- H_1 : There is significant difference between the achievement scores of control group students and experimental group students.

Population of the study

The population of the study consists of all bachelor degree students in the institutions of teacher education which offered a B.Sc.B.Ed Integrated course in Thiruvarur district in Tamil Nadu state.

Sample of the study

Students of B.Sc B.Ed integrated course in Thiruvarur district were selected on the basis of the computer facilities available in their campus for experimenting. Simple Random sampling technique was used to select sample for this study. Forty (40) students were studying in integrated B.Sc B.Ed in Teacher education in Thiruvarur district. Twenty students from integrated B.Sc B.Ed course were considered as the control group and another twenty students from integrated B.Sc B.Ed course were taken as experimental groups in the study.

Preparation of the multimedia package tool

The investigator divide the content into various segments then prepared content Audio –video script by using storyboard and adopted software such as Microsoft Office, Audacity, Adobe Photoshop, wav and Skype, zoom video teleconferencing software program and Audio-video, text, graphics, images and animation are used as multimedia package tools to develop listening skill among integrated B.Sc B.Ed students. Audacity is a multitask software used in several audio recording and MS office used in making the picture animated to draw students attention towards content and recording the audio by vocals through microphone.

Research design

The investigator designed the experimental study through the following steps.

- Phase-1: The researcher had gone through the syllabus of integrated B.Sc B.Ed students offered by teacher education in Thiruvarur district. He evaluated the classroom teaching and teaching method to know the learning ability in acquiring listening skill, grasping level and some other relevant learning behavior before preparing the multimedia package tool on the particular syllabus.
- Phase -2: The investigator prepared the multimedia package tool based on learner's requirements and other relevant learning behavior including all aspects what observed and analyzed on classroom teaching methods then it was brought to expert in the field of education technology to finalize the MPT (Multimedia package tool) to introduce in classroom teaching and collected all valuable suggestions given by the experts for further implementation.
- Phase-3: The investigator went on preparation of tool for this study. Pretest and post-test were considered as achievement test so it was prepared by investigator from prerequisites on the selected topics for listening skill. The achievement tests was prepared with help of blueprint and content analysis and conducted to both experimental group and control group students and

marks recorded. Statistical analysis of paired t-test was used to do analysis for collected data.

- Phase -4: Multimedia package tool was administered to experimental group students to learn the selected topics mean time control group students learned the same topics through face to face method like traditional method.

Experimental group students were allowed to use online mode to clear their doubts through skype ,zoom,and Facebook etc. Co-ordination was maintained by researcher from both sides about learning the same topic with same time for experimental group and control group. Post test was conducted for both groups at end of the period and marks were recorded to test hypothesis.

Tools for data collection

- The investigator developed achievement test on selected topics to serve as Pre-test and post-test based on blue-print.
- Objectives of the content analysis in behavioral terms: Content Analysis of Prose
- A paragraph has been taken from the lesson 'The Shepherd's Daughter' by William Saroyan for content analysis.

Content analysis

It is the opinion of my grandmother, God bless her, that all men should labour, and at the table, a moment ago, she said to me: You must learn to do some good work, the making of some item useful to man, something out of clay, or out of wood, or metal, or cloth. There was a king of the Persians, said my grandmother, and he had a son, and this son fell in love with a shepherd's daughter. He went to his father and he said, My Lord, I love a shepherd's daughter, and I would have her for my wife. And the king said, I am king and you are my son, and when I die you shall be king, how can it be that you would marry the daughter of a shepherd? And the son said, My Lord, I do not know but I know that I love this girl and would have her for my queen. The king saw that his son's love for the girl was from God, and he said, I will send a message to her. And he called a messenger to him and he said, Go to the shepherd's daughter and say that my son loves her and would have her for his wife. And the messenger went to the girl and he said, The king's son loves you and would have you for his wife. And the girl said, What labour does he do? And the messenger said, Why, he is the son of the king; he does no labour. And the girl said, He must learn to do some labour. And the messenger returned to the king and spoke the words of the shepherd's daughter. The king said to his son, The shepherd's daughter wishes you to learn some craft. Would you still have her for your wife? And the son said, Yes, I will learn to weave straw rugs.

Step-1

Linguistic analysis

- Knowledge of the strange words:- clay, ignorant, honorable craft,supposed,solid things. Persian,shepherd's daughter and straw.

- Pronunciation of difficulty words:- opinion, Persian, shepherd ignorant,labour,honorable,certainly and
- Spelling of difficult words:- ignorant, messenger, weave and craft.
- Compound words :-grandmother,youngman,coffee pot,plain dish,whole house and solid things.
- Adjectives :- good work,straw rugs, shepherd's daughter.

Literary analysis

- Grandmother said that all men should labour and learn to do some good work that making some item useful to man, making out of clay or out of wood or metal or cloth.
- Grandma said," there was a king of the Persian and his son fell in love with a shepherd's daughter but his father not accept his love because she was shepherd's daughter.
- Finally his father accepted because he was asking desperately about his love so the king saw that his son's love for the girl was from god so he will send messenger to shepherd's daughter.
- She said," what labour does he do? Why, he is the son of the king ,he does no labour, messenger replied but she said, he must learn to do some labour and messenger said to king then King'son said, yes,I will learn to weave straw rugs.

Step II

Instructional objectives

- Knowledge
 - Remember the usage of the unfamiliar words in the content.
 - Recall the pronunciation of the difficult words correctly in the paragraph.
 - Recognize adjectives and compound words in the paragraph about describe the characters.
- Understanding
 - Identify glossary or illustration of the vocabulary words in sentences.
 - Understand usage of adjectives and reported speech in the paragraph.
- Application
 - Construct the sentences with use of structures in the form of direct and indirect speech.
 - Use adjectives of love and labour and persons in paragraph effectively in their own sentences.
- Skill
 - Develop listening skill in English language through multimedia package tool about the content.
 - Develop receptive skill in English language through sentence formation

Step III

Teaching methods and procedure

Multimedia package tool was prepared with the help of integrated text, audio, graphics, animated slides and image to present the story effectively. Narration

and explanation method were used as teaching methods and self-reflection and own pace acted as an intrinsic motivational factors.

Step IV Evaluation

- Short answer questions
 - What is the title of the story?
 - “Why, he is the son of the king”, who said?
- Preparing the Achievement Test
- Reliability of the tool
 - For preparing the Achievement Test,
 - The following considerations were taken into account:
 - Blueprint
- Blueprint-Listening skill

Objectives	Knowledge			Comprehension			Skill			Expression			Total Marks	%
Form of Questions	SA	VSA	OBJ	SA	VSA	OBJ	SA	VSA	OBJ	SA	VSA	OBJ		
Prose (content) “The Shepherd's Daughter”		5(1)		3(2)				3(1)		2(2)		2(1)	20	100%
Total Marks		5		6				3		4		2	20	100%

Data analysis

The collected data was analyzed quantitatively.

Testing of hypothesis-I

There is no significant difference in pre-test score of achievement in history between control group and experimental group.

Table 1
Achievement in history-Listening skill

Variable	Test	Group	No of students	Mean	SD	t-value	Significant at 0.05 level
Achievement in history	Pre-test	Control group	20	8.09	1.04	0.620	Not significant
		Experimental Group	20	7.9	0.94		

With reference of the table-1 the mean and standard deviation values of pre-test of control group are 8.09 and 1.04 and experimental group are 7.9 and 0.94 respectively. The t-value of pre-test scores between experimental group and control group is 0.620 and it is evident that the t-value is less than the critical value of 2.093 with the degree of freedom 19 at 0.05 level. Hence the null hypothesis is accepted.

Testing of hypothesis-II

There is no significant difference between pre-test in achievement score and post-test in achievement score in control group.

Table 2
Control group - Listening skill

S.No	Control group	Mean	N	Standard Deviation	t-value
1.	Pre-test	8.05	20	0.89	1.65
2.	Post-test	8.5	20	0.58	

It is evident that the t-value is less than the critical value 2.093 with the degree of freedom 19 at 0.05 levels hence null hypothesis is accepted.

Testing of hypothesis-III

There is no significant difference between pre-test in achievement score and post-test in achievement score in Experimental group

Table 3
Experimental group –Listening skill

S.No	Experimental group	Mean	N	Standard Deviation	t-value
1.	Pre-test	7.45	20	2.16	13.22
2.	Post-test	14.35	20	3.29	

It is evident that the t-value is higher than the critical value 2.093 with the degree of freedom 19 at 0.05 levels hence null hypothesis is rejected.

Testing of hypothesis-IV

There is no significant difference between the control group and experimental group in the effect size. Effective size between is small.

Table 4
Cohen's d effect size

Variable	Group	Post-test		Effect size Cohen's d	Description
		Mean	SD		
Achievement in History	Control group	8.5	0.58	3.03	Extremely Large
	Experimental group	14.2	2.59		

With reference of the table-4, the effective size between control group and experimental group is 3.03 and it represent that the effect size between control and experimental group is extremely large based on the cohen's 'd' table. Hence the null hypothesis –IV is rejected.

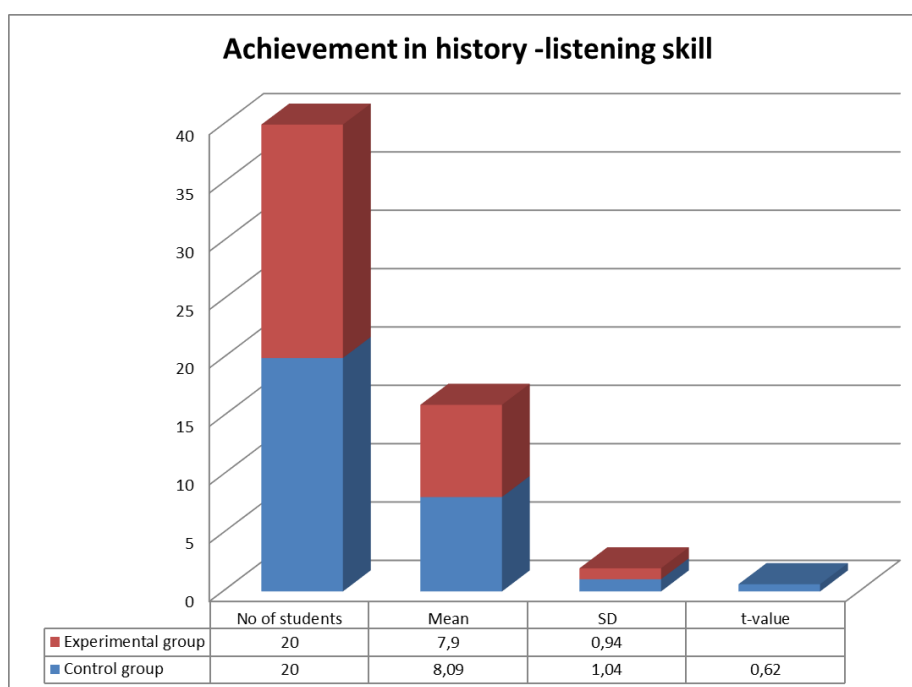


Figure 1

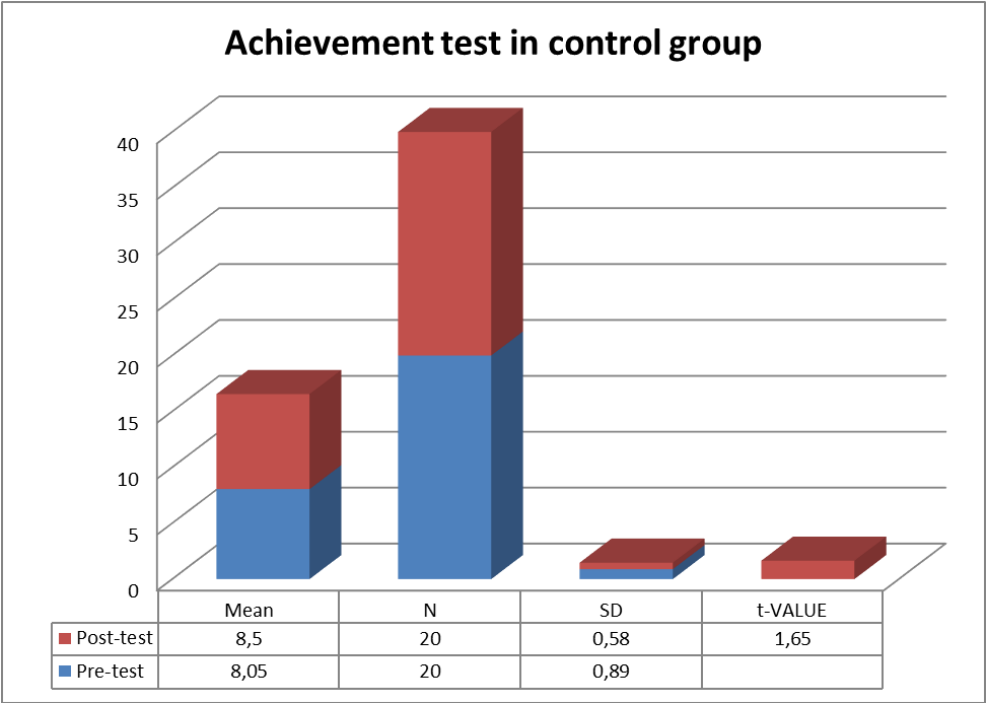


Figure 2

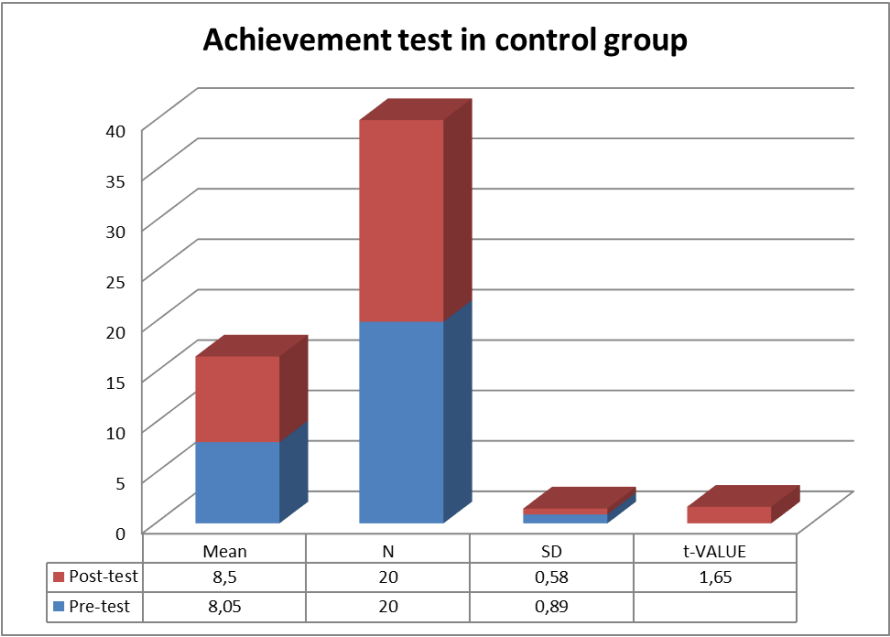


Figure 3

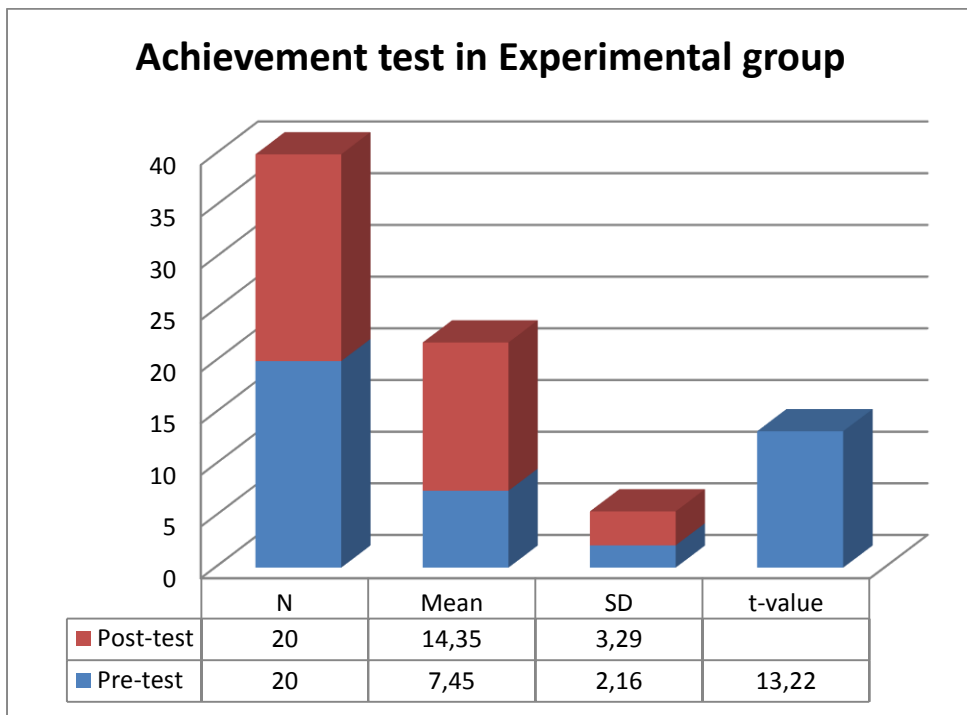


Figure 4

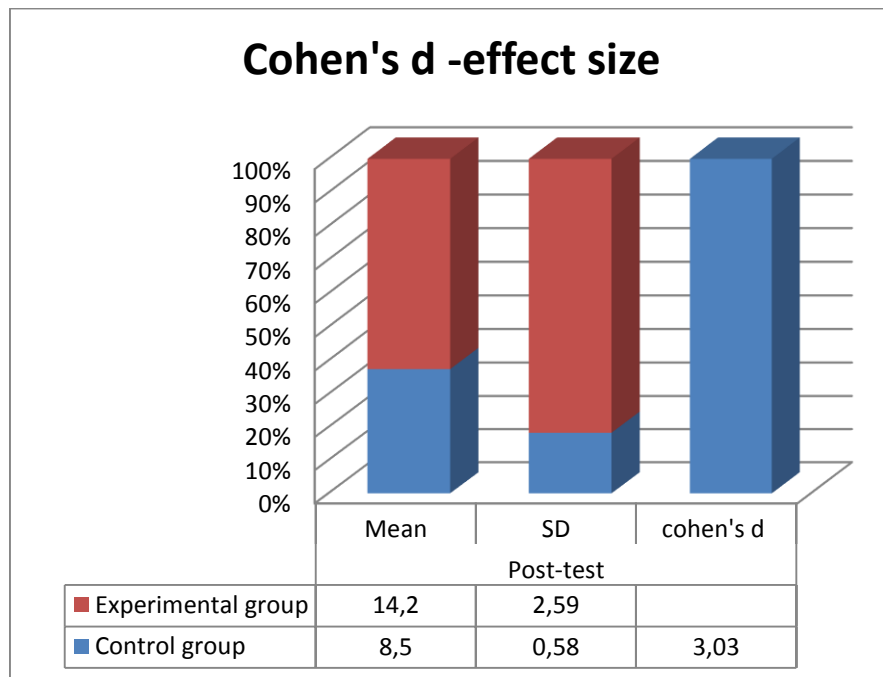


Figure 5

Findings

- There is no significant difference between mean achievement pretest score of control group and pre-test of experimental group in their history means two groups are equal in their IQ level.
- Post- test of mean score of control group (8.5) is less than post-test of experimental group (14.2) so chalk-talk method produces ineffective results among integrated B.Sc B.Ed students to develop listening skills especially multimedia package tool is more effective among integrated B.Sc B.Ed students who had computer facilities available.
- There is no significant difference in mean achievement score between pretest of the control group and post-test of the control group so the promotion of multimedia package tool is inevitable mark in higher education now a days.
- There is significant difference in mean achievement score between pre-test of the experimental group and post-test of the experimental.
- Cohen's 'd' test shown that large effect between mean achievement score of the post-test of the control group and post-test of the experimental group.

Educational implication

- HR marketing and personality development skill because communication skill acts as major role in these fields especially listening skill.
- It may bring the quality and advanced innovative curriculum in teacher education.
- Multimedia package tool is comes under teaching learning material so it might be replaced major role in all fields.
- It may be given boosting to promote tertiary education and vocational education.

Conclusion

Most of the students believed that more knowledge acquired by listening skill in the class room so multimedia package tool is a boon for students on acquisition listening skill and Due to lack of developing listening skill many students achieved poor academic score even though they are very intelligent in their field Consequently it will be alternate tool in the absence of effective teaching methods and effective teachers. Investigator concluded that based on the findings multimedia package tool helped students on acquisition of listening skill and to promote their knowledge especially in class room learning and advanced in learning during the pandemic situation. MPT brings effectiveness in their learning especially in teacher education. Multimedia package tool enable the teaching methods in effective manner and helps to improve academic score which will be acts main role in their academic and job carrier. Here the investigator does not say about replacing the teacher in the class room learning but it will helpful to teacher and students in teaching and learning process.

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