

The Use of ICT in Developing Reading and Writing Skills in Children with Hearing Impairment

Humara Bano & Abdul Hameed

Abstract

This research study was designed to see the effectiveness of video clipping (ICT) in teaching reading and writing skills to children with hearing impairment. It was a first study by its nature. The major concern was to investigate the effect of hearing loss on language development. Different studies conducted in Pakistan in this regard show that poor reading and writing abilities of children with hearing impairment multiply the effect of their hearing loss to the extent that they are not able to communicate even for their basic needs such as food, shelter and health etc. A lack of communication between teacher and taught leads to poor cognitive development. Through this experimental study the researcher has shared new teaching methodology to develop reading and writing skills among children with hearing impairment. Major objective of the study was to see the effectiveness of video clipping in developing reading and writing abilities of children with hearing impairment. The findings of the study are shared in this article.

Introduction:

Reading and writing are the minimum essentials for becoming effective and productive member of any literate society. Every human being is taught to read and write in order to acquire functional literacy. Literacy is a concept that is developed in children, both in and out of school, through formal, non-formal and informal learning systems. According to Universal Declaration of Human Rights, education is recognized as the right of every individual and is rooted to literacy (UNESCO, 2000). It is also observed that large number of children face many literacy problems. Technology can play an important role for literacy development among persons with disabilities. Technology is defined as *“any item, device, or piece of equipment that is used to increase, maintain, or improve the functional abilities of persons with disabilities.”* [3].

[2] defines the technology as “a functional knowledge of current technical means applied in human adaptive systems: skills to use and create such means: and the ability to find the way of controlling their impact on civilization.

The use of technology for children with hearing impairment can also help them to develop their literacy skills. Literature shows that literacy as a (reading and writing) skill among children with hearing impairment is too as they are unable to use their language smoothly. Deaf individuals struggle to reach third or fourth grade level by the age of 13 or 14, when normal students of the same age achieve at seventh or eighth grade levels. [3]. Also supported by [4] the average 18 to 19 year old students seem to be reading at a level similar to that of the average 8 to 9 year old student with typical hearing -, or , at roughly, a third or fourth grade level. He said that despite the reasons (artifacts of tests, poor instruction, etc) for this low level of script or print literacy, including a slow growth rate throughout the formal mandatory education period, and it seems difficult to read and write well to acquire academic information presented to them in printed material.) . Different studies conducted in Pakistan also reflects that reading and writing abilities of children with hearing impairment are still too poor as they are unable to use their receptive or expressive language for their daily life matters. Children with hearing impairment fail to develop the ability to understand instruction of the teacher written on the black board. They are not able to read simple advertisement and pamphlets [6].

Possible reasons for this low achievement may include the inability of the teachers of these children to communicate effectively with them [7].

Hearing loss affect the reading and writing abilities of the children with hearing impairment as they can't communicate even for their basic needs such as food, shelter and health etc [7]

As children with hearing impairment face difficulties to obtain information through printed

materials and most of the times the application of usual teaching method does not part to improve their reading or writing skills. The use of technology such as videos, video disc, computers, or captioned programs on TV. helps to develop the knowledge of these children Results indicates that when teachers use instructional techniques based on knowledge model of vocabulary development, along with technology supports, students develop in depth knowledge of words [5]. This was an on going Ph. D study and one part of this study is presented in this article. This article was based on the results of an experiment conducted in regard to develop the reading and writing abilities among children with hearing impairment through the use of captioned video clips in the experiment.

Problem statement

The study was conducted to us video clip as a strategy for teaching reading and writing skills in children with hearing impairment.

Objective of the study

Major objective of the study was to see the effectiveness of video clipping as a new teaching method for developing reading and writing skills to children with hearing impairment

Methodology:

Pre-Test Post-Test Control Group design was used to conduct the experiment. The major steps of the methodology were as under

A. Preparation of Video Clips: The video clips were prepared under the guidance of the experts. Major concern was to use these clips to explore the reading and writing abilities of children with hearing impairment. The content of these video clips was prepared under fifteen real life situations:

Personal Identity, Hygiene and Cleanliness, Eating Manner, Family Relations, Shopping ,Traveling and Visits, Marriage Party, Illness and medical care , Death, Technology and life, Interpersonal Relationship, Rituals, Love and hatred, Sports, Careers

A sample of 30 students, 10 each (5male and 5 females) from grade VI to VIII was selected randomly from the total 63 students enrolled in these three grades.

Five male and female students of each grade making total 15 were assigned to each (experimental and control) group randomly.

Two teachers were randomly selected from the school. First selection was assigned to control group whereas the second selected teacher was assigned to the experimental group. Both were the female teachers having the experience of teaching Urdu along the other subjects to the above mentioned respective classes.

B. Pre-Test of the both group:

Pre -test was conducted based on an Urdu language test of reading and writing (developed by the researcher) for both groups of same classes to assess their existing reading and writing abilities in Urdu language on the basis of obtained scores in the test.

C. Treatment (one month):

An experiment deliberately imposes some treatment on individuals in order to observe their responses. A specific experimental condition applied is called a treatment or, a treatment is something that researchers administer to experimental units. In this research the already prepared 15 video clips with Urdu captioning based on each real life situation was applied in the experimental group as a treatment to teach the reading and writing skills in children with hearing impairment. However the control group was treated with the usual teaching method. Major steps in treatment were as follows:

- The teacher introduced the topic verbally by writing it on the board.
- The video clip of the actual situation on the topic was showed to students.
- Students were asked to see the clip carefully.
- The teacher asked the students to write what they had observed in the clip.
- After the reviewing the (written) out put by the students the teacher showed them a standard description of video clip. This prepared text was based on three to four sentences.
- Teacher read and explained the text to the students in detail by using total communication method.
- The teacher asked the students to read the text with her.

- In order to extend the knowledge of the students and to develop the reading and writing ability in them the teacher asked the students to tell what they have observed in the clip which has not been covered in standard text.
- At this stage peer tutoring as a learning technique was also applied to explore maximum vocabulary of the students. The teacher facilitated the process by providing encouragement and positive feed back.
- The teacher helped the students to make simple sentences about video clip. The teacher made the special efforts to teach sentence structures and syntax.
- In this connection the students were encouraged to make and correct the sentences collaboratively whereas teacher also helped them to develop correct sentences with correct grammar.

D. Post- Test:

A post test was conducted after the one month treatment was over. The already applied Urdu test in pre test was used as post test. The scores comparison was made to see the difference in pre and post test on gained scores of the students in both groups.

Findings

The Independent Sample-t-test comparison on reading and writing test of children with hearing impairment showed no significant difference in means of experimental and control groups in pre-test. However the result of independent Sample-t-test comparison of children with hearing impairment showed significant difference in means on post-test, based on writing but no significant difference was found in reading.

Table 1.1 Result of Pre-Test:

Skills	Mean	Significance
Reading	12.87(C)	.800
	13.20(E)	.800
Writing	16.13(C)	.078
	19.93(E)	.078

- C indicates for control group & E for Experimental group

Table1.2 Result of Post-Test:

Skills	Mean	Significance
Reading	27.13(C)	.713
	27.93(E)	.713
Writing	25.00(C)	.000
	70.13(E)	.000

Conclusion:

The video-clipping method proved to be effective teaching method to develop writing skills among children with hearing impairment but it found to be in effective for teaching reading. There is a need to continue such studies so that the teachers of children with hearing impairment can be freed from the beliefs such as the hearing impaired students cannot be taught reading and writing effectively.

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