

The Effectiveness of A computerized Program in Teaching English Vocabulary to Hearing Impaired Elementary School Students

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Abstract—This study presents the effect of a computerized program on teaching English vocabulary to third grader deaf students in one of Gaza governorate schools for the deaf.

The researchers chose Al-Hanan School for Deaf to apply the computerized program, a diagnostic pretest was administrated to ten third grader deaf students. Seven of them were males. After four weeks of teaching the third graders English vocabulary through the computerized program, a post test was applied. Both the pretest and the posttest were statically analyzed through SPSS in order to get data and results.

The first result indicates that the computerized program has a positive effect, since it improved the skills of the experimental group. The second result indicates that deaf students' gender did not play any role in their recalling of vocabulary. The third result showed that the deaf student disability degree was not a crucial factor in their recalling of vocabulary.

The Computerized Program

The computerized program was specially designed to teach deaf students during the experiment. It was developed using Swish Flash Program, which works in different platforms without the need for preinstalled tools, the program consisted of five screens as follows:

- The first screen contains the program's name and authors.
- The second screen, home screen, contains the cover photo of the third grade English book, with buttons to lead the students to the different parts of the program.
- The third screen contains (ASL) alphabets.
- The forth screen includes the dictionary, which contains twenty five vocabulary from unit two in

the third grade English book. It also includes a video of each vocabulary designed through the use of (ASL), along with the written vocabulary and a picture of the object taken from the same English book. It is worth mentioning, the videos are accompanied by voice i.e. pronunciation for the word taken from the original resource. Including the pronunciation the researchers intended to invite the deaf students' parents to follow up.

- The fifth screen includes five exercises for feedback, whenever the answer is wrong a sad emoticon will appear, and when the answer is right a laughing emoticon will appear.

The four-week program was applied after the pretest, with a ratio of three forty minute classes every week.

I. Introduction

Vocabulary is considered as the first step of learning and acquiring the language whether the mother tongue, second or foreign language. It is of crucial importance for any learner. It is like the basis of any building, and the more the one builds new words, the more s\he communicates well.

Teaching the different types of vocabulary even to normal school students is sometimes a challenge for teachers in the class. This might be due to the students' low achievement level, lack of interest and motivation or ineffectiveness of teaching methods and practices teachers normally use. The related literature proves this. Generally speaking, teaching hearing impaired students is not such an easy task. It requires that the teacher should know the special conditions

and needs for those students and hence to be patient, tolerant and creative. Such teachers should be educated enough to use the sign language and to teach the materials using the particular sign language that suits the subject to be taught.

One of the challenges in teaching is teaching English for deaf students as a second language, since the deaf cannot be taught all the skills. This research is concerned with teaching English vocabulary to deaf third graders through a computerized program in order to help them memorize as much vocabulary as they can. The computerized program was designed to create interaction and motivation for the deaf students. The program was concerned in presenting vocabulary and pictures in unit two at the third grade English book along with American Sign language (ASL) and videos presenting each word.

II. The Study Problem

In general deaf learners are of so much need for learning English as a second language, they need to learn new words as much as they could; It is well known that here in Gaza Strip deaf students are being taught English using (ASL) unlike other subjects which are taught through Palestinian Sign language. This mostly makes confusion for deaf students who cannot memorize English vocabulary which they have learnt, as they are exposed to (ASL) in the class only for limited time.

III. Research Questions

- 1- To what extent does the suggested computerized program help deaf student memorize English vocabulary?
- 2- Are there any differences between deaf students in recalling vocabulary due to sex?
- 3- Are there any differences between deaf students in recalling vocabulary due to their disability degree either they were partially or totally deaf?

IV. Research Objectives

This research aims at achieving the following objectives:

- 1- Measuring the effectiveness of a computerized program on deaf students memorization and recalling of vocabulary.
- 2- Connecting motion pictures with the concept in memorization English vocabulary for the deaf students.
- 3- Helping deaf students identify vocabulary through various techniques.
- 4- Create an enjoyable atmosphere in the class during the learning process.

VI. Hypotheses

From the research problem the researchers put the following hypotheses:

- 1- The suggested computerized program is expected to be effective in teaching English vocabulary for deaf third graders.
- 2- There are significant differences in recalling English vocabulary between male deaf students and female ones.
- 3- There are significant differences in recalling English vocabulary between partially deaf students and totally deaf ones.

VII. Limitations

The researchers have used the experimental approach in applying this research. This approach needs longer time than one semester, which was the determined period for the research, and for this reason the researchers included only one unit from the third graders' English book.

Another limitation is that the number of schools for deaf students is limited in Gaza Strip and because of that the researchers choose Al Hanan Deaf School in Deir El-Balah.

Methodology of the Study

The study attempted the experimental approach which acquires one group consists of deaf third graders students. The researchers have followed the strategy of making two tests, pre and post one. Teaching vocabulary through a computerized program was used in teaching the subjects of this experimental group.

The Study Population

The study population consists of all deaf third grader students at schools for deaf at Gaza governorates for the school year (2012 – 2013). The population of the study was (80) students; (47) males and (33) females.

Sample of the Study

The sample of the study consisted of ten students all together in one group. The group was randomly chosen from a purposive sample from deaf schools in Gaza, El-Hanan Deaf School in Deir El-Balah. Table (4.1) shows the distribution of the sample.

Instrumentation

To achieve the aims of the study, the researchers used an achievement test and designed a computer program.

1. Achievement Tests

An achievement test strategy consists of pre and post test prepared by the researchers to measure the subjects' achievement. It was used as a pre test applied before the experiment and as a post test applied after the experiment.

2. Computer Program

A computer program was specially designed to teach the deaf student during the experiment. The program was developed using Swish Flash Program, which works in different platforms without the need for pre installed tools, the program consisted of five screens as follows:

- **The first screen** contains the program's name and authors.
- **The second screen**, is home screen, contains the cover photo of the third grade English book, with buttons to lead the students to the different parts of the program.
- **The third screen** contains (ASL) alphabets.
- **The forth screen** includes the dictionary, which contains twenty five vocabulary from unit two in the third grade English book. It also includes a video of each vocabulary designed through the use of (ASL), along with the written vocabulary and a picture of the vocabulary taken from the same English book. It is worth mentioning, the videos are accompanied by voice i.e. pronunciation for the word taken from the original resource. Including the pronunciation the researchers intended to invite the deaf students' parents to follow up.
- **The fifth screen** includes five exercises for feedback, whenever the answer is wrong a sad emoticon will appear, and when the answer is right a laughing emoticon will appear. The four-weeks program was applied after the pre test, with a ratio of three forty minute classes every week.

Summery of Findings

Here we can summarize the findings of the study:

- 1- There are significant differences between pre and post test results and the total positive degree in the test domain, towards post test. These results indicate that the computerized program is effective in teaching English vocabulary for deaf third graders.
- 2- There are no significant differences in recalling English vocabulary between male deaf students and female ones. These results indicate that deaf student gender did not play a significant role in their recalling of English vocabulary .
- 3- There are no significant differences in recalling English vocabulary between partially deaf students and totally deaf ones. These results indicate that deaf student degree of disability did not play a significant role in their recalling of English vocabulary .

Recommendations

In the light of the results of the study, the researchers recommend that:

Ministry of Education should:

- 1- Design special English curricula for the deaf students which is appropriate for their characteristics and academic level.
- 2- Computerize the curriculum like using flash programs, PowerPoint presentations and computerized games, which based on the visual input.
- 3- Provide training for the teachers of the deaf and mandate experienced teachers and internal supervisors to support the other teachers of the deaf.

Schools of Deaf Students need to:

- 1- Provide the teachers of the deaf with suitable training on using the modern techniques in teaching their students.
- 2- Motivate students, which helps the deaf student to achieve more progress.

English Language Teachers for Deaf Students are required to:

- 1- Use computerized programs in teaching English specially vocabulary to help deaf students in their achievement of English language.
- 2- Focus on using "Pictures" to facilitate the deaf students learning for English
- 3- language vocabulary.

- 4- Relate computerized programs with teaching vocabulary and improving their general achievement in English.
- 5- Strengthen the relationship with deaf students which creates enjoyable classroom atmosphere and facilitates the learning-teaching process.

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