Letter transformation at linguistic understanding of deaf people

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Abstract: The paper analyzes the importance of writing in linguistic understanding of the text, through the transformation of the original programmed hand alphabet as the font (PC & DEAFNESS). The aim of the research was to examine the understanding of the correspondence between the deaf children, through comparative analysis at understanding of the content at transformation of PC&DEAFNESS into font Times New Roman. To realize the set goal, the combined programs were used to write two letters at the specially designed software package. Research was conducted on a sample of 70 subjects of deaf children, which is divided into two equal and uniform subsample of the 35 subjects, of which one subsample is an experimental group and the second control group. The experimental group was writing to each other with programmed alphabet, with the possibility of transformation of the letter, and the control group with standard script, with no possibility of transformation. Evaluation of results and testing hypotheses about the significance of the difference of writing two letters and understanding at deaf children, has been expressed by the analysis of changes, using canonical discrimination analysis, which showed that the two samples differ significantly, at a significance level of P = 0.00. It was found that the respondents of experimental group showed better results in writing programmed alphabetical letter, with the possibility of transformation of the font.

Key Words: programmed alphabet, remote communication of the deaf, pragmatic method, printed sign language

Introduction

We observed two groups of people in objective reality. Ones with hearing impairment (deaf, hard of hearing) and ones with no hearing impairment (so called ordinary). Deaf child has the same chances for psychic and physic development like ordinary child, but if we consider hearing impairment influence on socialization we will find a problem to discuss. The speech is very important in human development. The most important and first function of speech is communication and so then socialization. Deaf child has to relay on visual experience and when it is about communication and socialization, deaf child experiences troubles. Deaf can develop their speech but it is conditioned with many factors. With frequent use of speech and by using appropriate rehabilitation procedures their speech can be developed. The newest technologies and researches do not solve these problems. Even CI does not make expected progress. According to World Federation of Deaf in developing countries there is less than 20% deaf children that go to school regular. The most of young deaf continue living after schools illiterate and with poor knowledge about society. The reason is nonexistence of appropriate rehabilitation and language programs. Lets review older and recent surveys. About 50% young after finishing secondary school read and write worse than 10 year old ordinary child (Traxler, 2000). About 30% deaf and hard of hearing finish secondary school functionally illiterate (Marschark, Lang, Alebertini, 2002). Now there are possible solutions. The writing should be activated in early period of life, 5 years (E. Ferreiro, 1990; D.Olson, 1994). The importance of early writing is explained at Dickinson, McCabe and Essex, 2006. The logic is simple, to be literate deaf child has to learn language of the community. It can learn letters, learn to write but if it does not know language then it does not know what are the things it writes or reads (Halliday, 1975; Wells, 1981; Kress, 1994; Mayer and Wells, 1996; Mayer, C. 1998; Luetke-Stahlman, 1998; Kyle and Harris, 2006). The important thing is methodological admittance at training (Paul, 1998). Why deaf spell in hand alphabet? It is about dynamic perception that is the consequence of psychic dimensions of deaf person (Hasanbegović, H. and Sinanović, O. 2008). The importance of hand alphabet is not known yet at scientific public (Hasanbegović, 2004). This survey has the task to point on better results with use of hand alphabet.

Method of the Study

We used method of experiment and then we did quantitative analyzes. For experiment we tested the success of text retyping. We use two different fonts for comparison. The first standard Latin font in MS Word, example: Times New Roman. The second newly crated, original one hand alphabet font that is explained at paradigmatic method of teaching deaf to language (Hasanbegovic, 2007).

Sampling

We had sample of 70 deaf children. We divided it in two equal and homogenous sub samples. The first was experimental and the second was control group. The experimental group had an opportunity to use one hand alphabet font, and the control group had not.

Varijable

The most important variable in this experiment was the variable about clear typing. We took into consideration the number of mistyped and substituted letters or graph in total count of words in the the text.

Data Analysis Processes

We done the data analysis on very simple way. We gave children the text to retype. Then we compared the results of experimental and control group and processed data in SPSS software under discriminative analysis.

Findings and Discussion

Writing

The writing is very complex activity and in order to learn it one has to learn to speak first. These two activities are connected and conditioned each other. People express their feelings, taught and experiences by speech and write. The most complex type of language expression is written text. In order to send clear message one has to specify all details, even those that are not said in oral speech. Ordinary children learn to speak, then in school they learn to write. Despite those, children with hearing impairment learn to speak and write at the same time, which consider troubles. It is very clear now why deaf children never achieve the writing skill level as ordinary ones. They have weak vocabulary, write slow, make grammar mistakes. The writing and oral speech are the part of same mental process. The difference is in expression form. Deaf write as they speak, so their written text is the best for language skills. The fact that is called literacy is conditioned by language knowledge level, so the logical procedure of learning is speech and then writing. The child learns language by listening and then it practice speaking and finally it learns to write. Because deaf children can not learn hear, but they can learn to pronounce, my researches showed that reverse procedure can be useful. Children learn to write first, using the transformation of letters to dynamic basis of hand alphabet that is psychological acceptable to deaf children. There is statistic important difference between those children that were tested with use of Times New Roman windows font and those that were using newly created experimental font that represents one hand alphabet. Experimental group had better results. The control group (the one that used Latin font) typed 967 words with 91 mistakes (9,41%). They had missing letters in 31 words (3,21%) and they had wrong letters in 51 words (5,27%). The experimental group typed 16 words with mistakes (2,38%). They had missing letters in 11 words (1,63%) and they had wrong letters in 5 words (0,74%).

Conclusions and Recommendations

This survey proves that one hand alphabet font supports typing/writing at deaf children. The deaf child interaction with computer is logical because the computer supports those dynamic dimensions that are familiar with the basis of deaf cognitive development. Because of that, today we can find a lot of mini software which purpose is to help deaf. The language education requests many skills while programming courses and educational programs and the most important thing is to know psychology of deaf.

So there are less software that is supported with this type of admittance. Despite those software with one hand alphabet font solves those problems and helps deaf to write/type. The computer software for education of deaf is consisted of next products: DEAF&WRITING – one/two hand alphabet font, DEAF&KEYBOARD – adapted keyboard with one/two hand alphabet marks on it, and operative program for language learning. DEAF&WRITING is one/two hand alphabet font published in (Hasanbegović, 2004). It enables more efficient way of reading, writing and learning at deaf. Also it enables distance communication, printing and its wide usage. For that purpose we also invented keyboard for deaf with one/two hand alphabet marks on it (DEAF&KEYBOARD). The operative program is constructed like dictionary with words in it that have dynamic

support, like pictures, pronounces, sing language examples for every word, and it can be used with Latin or one/two hand alphabet font.

Operative program characteristics

The operative program is unique teaching technology that has all interactivity needed to focus attention of student, and most important thing, it gives results. The program is standalone flash .exe that can be started from CD or hard drive. The program request installed one/two hand alphabet font for optimal use. The program has three dimensional space that represents classroom. There are panels that are hidden in the walls. All panels have hide/show option and all can be started at the time. So it is up to pupil to use desired panels for learning. The language and pronounce learning is based on original approach. The most frequent words are explained in details with implementations on all panels. They have picture symbol that associate the word with its semantic representation.

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