Orthography as an Augmentative System in Cerebral Palsied

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Augmentative communication systems are found to facilitate communicative skills in most of the nonverbal individuals including cerebral palsied individuals. Though symbol systems such as pictorial drawings, rebuses, blissymbols and many others, may be used, traditional orthography as the symbol system may be more appropriate in the present day situation in India - the reason being its acceptability, universality, generalisability, and utility in schools. However the major drawback with traditional orthography is its opacity and idiosyncracy.

The present study aimed to study the learning of easy lexical items with the use of enhanced orthography in Kannada in the cerebral palsied individuals. Thirty cerebral palsied children, verbal as well as nonverbal, were selected as subjects. These children were classified as belonging to preschool, transition, I grade and IV grade (prevocational) levels differing in the degree of exposure to Kannada orthography. It was ensured before the selection of subjects that they had no intellectual disability, cognitive disabilities, visual and auditory perceptual disabilities, or deficits. The materials selected for this study were 15 lexical items in Kannada, which were identified as part of the receptive vocabulary of the subjects. A set of 15 referent cards consisting of 2-d line drawings of the chosen, lexical items were prepared by an artist. A set of 15 symbols consisting of orthographical representations of the selected referents were prepared. This set of symbols was called, for convenience, as unemphasised symbols. These were subjected to modification by emphasising a part of the written word (which resembled the referent) to obtain a set of 15 emphasised symbols. In the third symbol set, a part of the written word was enhanced to resemble the referent. This set of symbols was referred to as the enhanced symbols.

The subjects selected for the study were given a training session using the 15 referents and their respective 3 sets of symbols (enhanced, emphasised and unemphasised symbols). A resemblance between the unemphasised, emphasised and enhanced symbols and the referents were shown to the subjects for the 15 lexical items. A test was administered the following day, in which referents were laid in front of the subjects and the symbols from the 3 sets (unemphasised, emphasised and enhanced) were produced, one by one, in a random order. The subjects were expected to identify the appropriate referent picture in front of them and responses were recorded in a test format

The test format had provision for recording verbal or non verbal response of the subjects. If the children could not respond spontaneously or with self corrections, appropriate cues in the form of repeating the instructions, auditory cues or visual tracing cues were given. These responses were scored on a 5 point rating scale according to the cues that were required to elicit the response. The raw scores were tabulated and were subjected to statistical analysis. The results were found to be as follows :

1. Enhancement of symbols facilitated learning of written words. The number of enhanced symbols identified were more as compared to empahsised and unemphasised by all groups of subjects.

2. Performance increased from preschool level to fourth grade level. In other word, first grade and fourth grade children were able to learn the symbols faster and with ease as compared to preschool and transition children. Performance on the 3 symbols sets (unemphasised emphasised and enhanced symbols) by the higher grade children was almost similar; and for preschool and transition level children, the performance on enhanced symbols was higher as compared to unemphasised and emphasised symbols. Learning of orhtographical symbols may vary, in general, with varying degree of exposure to orthography. For young children below the level of I grade, enhancement of symbols used in AAC is crucial.
3. There was no difference in performance between, highly iconic and less iconic symbols of this study ie., lexical items did not differ in the degree of arbitrariness.