



UNIVERSITEIT VAN PRETORIA  
UNIVERSITY OF PRETORIA  
YUNIBESITHI YA PRETORIA

# **The Application of the Self-Generation Effect to the learning of Blissymbols by persons presenting with Severe Aphasia**

**Priya Rajaram**

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Dedicated in loving memory to

my late father

*Mr Arnand Rajaram Gopee*

and my late grandfather

*Mr Rajaram Gopee*

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## ABSTRACT

### **The Application of the Self-Generation Effect to the learning of Blissymbols by persons presenting with Severe Aphasia.**

A severe aphasia following a cerebral vascular accident is characterised by generalised deficits in most speech-language domains. The clinical dilemma remains focused on the extensive verbal speech impairment and in most cases little possibility of regaining verbal speech production. Many individuals living with severe aphasia use augmentative and alternative communication strategies to assist them in getting their communication needs met in their everyday lives. The Blissymbol system is one of the graphic symbol systems that can be used to supplement existing communication and speech strategies of the individual with little or no speech.

Although the use of AAC strategies is gaining momentum in its application to severe aphasia, however, there still remain questions on how best to help these individuals learn and retain such strategies. Not only are individuals with severe aphasia faced with a memory task when learning AAC strategies such as Blissymbols, additional complexity to AAC interventions is derived from clinical presentation of severe aphasia. The presence of extensive damage to the neural centers responsible for linguistic processing and semantic retrieval makes learning of new AAC strategies all the more complicated.

Research studies have looked at whether individuals with severe aphasia can learn to recognise and retain Blissymbols. Although these studies have successfully shown that individuals with severe aphasia can learn Blissymbols, there is little information available regarding how these symbols can best be taught and retained over time individuals with severe aphasia. Recently the research that has looked at the application of symbol learning with persons presenting with severe aphasia using computer technology and sophisticated application software has highlighted the importance of therapeutic methods that may enhance the learning of such software.

This study looks at the application of the self-generation effect as a viable method for enhancing the recognition of Blissymbols in persons presenting with severe aphasia. The self-generation effect is the finding of superior retention and recall for stimuli constructed or generated by an individual. Memory for stimuli such as words, numbers and pictures were found to be enhanced by the extent to which the individual was involved in its construction. Using a 2X2X3 factorial design, this study compared the recognition levels for Blissymbols taught using two treatment approaches which was the self-generation condition and the non self-generation condition. During three experimental sessions which included two withdrawal periods participants were taught using both treatments to recognise a set of Blissymbols. Recognition levels were tested during recognition probes and retention probes. The results from these probes were compared in order to identify which treatment produced superior recognition levels.

The data analysis conducted showed that although there was no recognition advantage for the self-generation effect seen during the three recognition probes some advantage for the self-generation effect was seen during the retention probes conducted. The self-generation effect began to emerge by the final retention probe following a withdrawal period of seven days. The self-generation treatment showed better retention of symbol recognition over time. Previous studies have shown that the self-generation effect failed to emerge with stimuli that were new or unfamiliar. This trend was also seen in this study. The results provide support for a semantic-association theory for the self-generation effect.

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**Key terms:** severe aphasia, self-generation effect, Blissymbols, augmentative and alternative communication (AAC), symbol learning in aphasia, factorial design, symbol translucency and complexity, symbol recognition.



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