

Using a matrix strategy to teach graphic symbol combinations to children with limited speech during shared storybook reading

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Soli Deo Gloria

“Let him who boasts boast in the Lord.”

1 Corinthians 1: 27

I am grateful to the Triune God, my Lord, my Maker and my Saviour for the opportunity granted to me to study. Through my studies He has taught me so much—about myself but more importantly about His nature—His faithfulness and unfailing love. All glory and honour and praise belong to Him, Who was and Who is and Who is to come.

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Abstract

Children with limited speech using graphic symbols for communication often express themselves predominantly through single symbols rather than symbol combinations. This study aimed to investigate the effect of an intervention strategy that was incorporated into shared storybook reading on the production of graphic symbol combinations. Three children between the ages of 7;9 (years;months) and 10;8 with limited speech and physical impairments participated in the study. A multiple probe design across behaviours (3 different types of semantic symbol combinations) was used, replicated across the 3 participants. Intervention entailed prompting the production of strategic symbol combinations (generated from a matrix) during shared storybook reading by using a prompting hierarchy. The participants' production of combinations targeted during intervention as well as their ability to generalize to nontarget combinations from the matrix was monitored using a probe test (picture description task). All 3 participants showed some gains in acquiring the combinations and generalizing to nontarget combinations, as measured by the probe test. While 1 participant showed convincing effects, the other 2 showed lower effects. Lower effects may be partly ascribed to participant characteristics as well as to the discrepancies between the intervention and probe contexts. All participants performed better within the shared storybook reading context. Results suggest that the production of symbol combinations can be facilitated during shared storybook reading and that the matrix strategy promotes generalization to untrained semantic combinations. However, participant gains may not reflect immediately in formal testing situations.

Keywords:

Aided communication, augmentative and alternative communication, children, graphic symbol combinations, language learning, limited speech, matrix strategy, multiple probe design, prompting hierarchy, shared storybook reading.

Opsomming

Kinders met beperkte spraak wat grafiese simbole vir kommunikasie gebruik, druk hulself dikwels hoofsaaklik deur die gebruik van enkel simbole uit, eerder as deur die gebruik van simboolkombinasies. Hierdie studie het gepoog om die effek van 'n intervensiestrategie wat by gedeelde storieboeklees geïnkorporeer is op die produksie van grafiese simboolkombinasies te ondersoek. Drie kinders tussen die ouderdomme van 7;9 (jare;maande) en 10;8 met beperkte spraak en fisiese gestremdheid het aan die studie deelgeneem. 'n Ontwerp vir veelvuldige proewe oor gedragsvorme heen (3 verskillende tipes semantiese kombinasies) en wat oor 3 deelnemers herhaal is, is gebruik. Intervensie het behels dat die produksie van strategiese simboolkombinasies (soos gegenereer vanaf 'n matriks) gedurende gedeelde storieboeklees deur die gebruik van 'n hiërargie van leidrade aangemoedig is. Die deelnemers se aanleer van die kombinasies wat gedurende intervensie geteiken is, asook hulle vermoë om te veralgemeen na nie-teiken kombinasies van die matriks, is deur die gebruik van 'n toets (prentbeskrywingstaak) gemonitor. Al 3 deelnemers het 'n mate van vordering getoon in die aanleer van kombinasies en die veralgemening na nie-teiken kombinasies, soos gemeet deur die toets. Terwyl 1 deelnemer oortuigende effekte getoon het, het die ander 2 laer effekte getoon. Laer effekte kan gedeeltelik aan eienskappe van die deelnemers asook die gebrek aan ooreenstemming tussen intervensie- en toetskontekste toegeskryf word. Alle deelnemers het in die konteks van die gedeelde storieboeklees beter presteer. Resultate dui aan dat die produksie van simboolkombinasies gedurende gedeelde storieboeklees gefasiliteer kan word en dat die matriksstrategie die veralgemening na ongeteikende semantiese kombinasies kan bevorder. Deelnemers se wins in vaardighede mag egter nie dadelik in formele toetsituasies reflekteer nie.

Sleuteltermes:

Aanleer van taal, aanvullende en alternatiewe kommunikasie, beperkte spraak, gedeelde storieboeklees, gesteunde kommunikasie, grafiese simboolkombinasies, hiërargie van leidrade, kinders, matriksstrategie, veelvuldige proef ontwerp.