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In compliance with American Speech-Language Hearing Association’s Continuing Education Board’s Requirements, ISAAC Conference 2016 requires program planners and instructional personnel to disclose information regarding any relevant financial and non-financial relationships related to course content prior to and during course planning.

Based on the information provided, ISAAC Conference 2016 will engage the program planner/instructional personnel in a guided interview process which seeks to understand how the relevant financial or non-financial relationship may influence the content of the course.

Program Planner/Instructional Personnel’s Name: Kyoung Kim

Course Title: The Effects of Switch Training in AAC intervention on Children with Severe Physical Disabilities

HIPAA REQUIREMENTS

To comply with the Health Insurance Portability and Accountability Act (HIPAA), we ask that all program planners and instructional personnel ensure the privacy of their patients/clients by refraining from using names, photographs, or other patient/client identifiers in course materials without the patient’s/client’s knowledge and written authorization.

I am in compliance with these policies: [ ] Key (INITIAL HERE)

Relevant financial relationships are those relationships in which the individual benefits by receiving a salary, royalty, intellectual property rights, gift, speaking fee, consulting fee, honoraria, ownership interest (e.g., stocks, stock options, or other ownership interest); excluding diversified mutual funds), or other financial benefit. Financial relationships can also include “contracted research” where the institution gets the grant and manages the funds and the individual is the principal or named investigator on the grant.

Do you have relevant financial relationships to disclose?
[ ] No [ ] Yes (if yes complete Financial Relationship Disclosure Form)

Relevant non-financial relationships are those relationships that might bias an individual including any personal, professional, political, institutional, religious or other relationship. May also include personal interest or cultural bias.

Do you have relevant non-financial relationships to disclose?
[ ] No [ ] Yes (if yes complete Non-Financial Relationship Disclosure Form)

I attest that the information in this disclosure is accurate at the time of completion and I agree to notify ISAAC Conference 2016 (conference2016@isaac-online.org) of any changes to this information between now and the scheduled presentation date. I also understand that all completed Disclosure Forms must be incorporated within my paper proposal, as part of my Long or Extended abstract upload to the ISAAC Conference 2016 paper submission system.

Signature: Kyoung Kim

Date: 10-11-2015

ISAAC Conference 2016
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The Effects of Switch Training in AAC Intervention on Children with Severe Physical Disabilities

Short Abstract

The purpose of this study was to demonstrate the effects of switch training in AAC intervention on the communication, switch control, and AAC device use of children with severe physical disabilities. This study followed pre-test, AAC intervention with switch training, post-test and generalization. The research design of study was multiple case studies. AAC intervention with switch training comprised of cooperative evaluation by professionals, switch control training, and AAC device use training. The results found in this study were as followed: First, the communication of children (i.e. vocabulary evolution scores and communication behavior scores) is much improved after the post-test. Second, switch control capabilities of children is gradually enhanced in the post-test compared to the pre-test. Third, upgraded AAC device use capabilities of children were found in the post-test, for instance, children was able to handle 45 cells of AAC tools(Mytalkie) instead of 10 cells in the pre-test. This study highlights the importance of cooperative evaluation between professionals and the need for the study of switch training adaptation for children with physical severe disabilities during AAC intervention.

Purpose

AT is an important pathway to have the independence of people with severe disabilities in the world. In the case of Korea, after the Special Education Law for the Disabled passed in 2007, AT were considered and as essential service for individuals with severe disabilities and included in school program. However, the application of the AT is still limited to the children with severe physical disabilities. Especially, in the field of AAC research, there is few research applying AT device (e.g. switch) to use AAC device and program. The critical reasons are as followed: the high cost of purchasing the appropriate switch and AAC to individual disabilities, the lack of interface that allows to connect and use AAC tools and switches, the absence of evaluation experts to find a suitable switch for the individual student, and limited research for switch training. Thus, it is essential in Korea, we need study result verify to be effective in improving the student's ability on AAC training with switch. The purpose of this study was to demonstrate the effects of switch training in AAC intervention on the communication skill, switch control, and AAC device use of children with severe physical disabilities.

Method

1) Participants
The participants were students with severe physical disabilities. Selection criteria of participants were as follows; ① the students who need AAC because of complex communication need, ② students with physical multiple disability, ③ students who don't have participated in AAC intervention before, ④ students with parental consent. The information of the participants summarized as <table 1>.

<table>
<thead>
<tr>
<th>Participants</th>
<th>Diagnoses</th>
<th>Gender</th>
<th>Age</th>
<th>School</th>
<th>Grade</th>
<th>Primary modes of communication</th>
<th>IQ test</th>
<th>G M F M</th>
<th>Sense</th>
<th>AAC Experience</th>
<th>Switches experience for AAC device</th>
</tr>
</thead>
</table>

2) Materials

This study had two materials: switches and AAC device. Types of switch were such as Bigred switch, joy stick, head switch, and Pillow Switch. AAC device was Mytalkie. As a Korean AAC tool, Mytalkie is easy for editing and using. Mytalkie is equipped with 10,000 symbols and vocabularies and provides 23 different voices.

3) Research design

The research design of study was multiple case studies. Multiple case designs consist of a repeating studies that apply the same intervention in a variety of cases and the analysis unit complex design. In this study, cases were three (participants A, B, C) and embedded unit of analysis were three (Communication skill and behaviors, Capability of switch control, Capability of AAC device use).

The research procedure followed pre-test, switch training in AAC intervention, post-test and generalization.

4) Independent variable: Switch training in AAC Intervention

Switch training in AAC Intervention were independent variables of this study. It consisted of three steps: ① Cooperative evaluation with physical therapists and speech therapists. ② Four levels of switch control training (e.g. modeling, physical prompt, verbal prompt, reacting). ③ Five levels of AAC device(Mytalkie) use training(e.g. preference evaluation, symbol learning, matching training, social story, conversation training).

5) Dependent variable and Data collection

First, communication skill were scores of assessment tools and so evaluation was conducted by using the assessment tools. Communicative behaviors were collected by the number of turn-taking for 10 minutes during storytelling time

Second, capability of switch control was ability of waiting and acting the switch. It was measured by the time to activate the switch during using AAC device.

Third, capability of AAC device use was the ability to use AAC device independently. It was evaluated by collecting AAC device cells(Mytalkie plate) used independently.

Results & Conclusion

The results found in this study were as followed:

First, the communication of children (i.e. vocabulary evolution scores and communication behavior scores) is much improved after the post-test.

Second, switch control capabilities of children is gradually enhanced in the post-test compared to the pre-test.
Third, higher capabilities of children with upgraded AAC device use were found in the post-test. For instance, children was able to handle 45 cells of AAC tools(Mytalkie) in the post-test compared to 10 cells in the pre-test. This study highlights the importance of cooperative evaluation between professionals and switch training adaptation for children with physical severe disabilities during AAC intervention. In Korea, this study for using the switch with AAC training is significantly important as the first fundamental research in order to verify its effects on students with severe physical disabilities.

References


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Declaration of Interest Statement

KyungYang Kim disclose I have no financial or other interest in objects or entities mentioned in this paper.