



How AAC Devices can be Improved for Students with Speech Impediments

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INTRODUCTION

There is currently an issue with the effectiveness of Augmentative and Alternative Communication (AAC) devices for students with speech impediments. 7.7% of all US children have some form of speech impediment. That number has grown by 20% over the last 10 years (Black, 2012). Communication disorders cost the United States \$186 billion per year, which is 3% of the Gross National Product (Humes, 151). Unfortunately, the only products on the market, which help people with speech impediments communicate, are extremely expensive. Existing technologies are either very inefficient or very expensive, costing up to \$10,000 (Hasselbring, 114). Even though communication disorders in children are so prevalent, and have such large setbacks for necessary equipment such as AAC devices in the classroom, there is no current research of how to improve AAC devices.

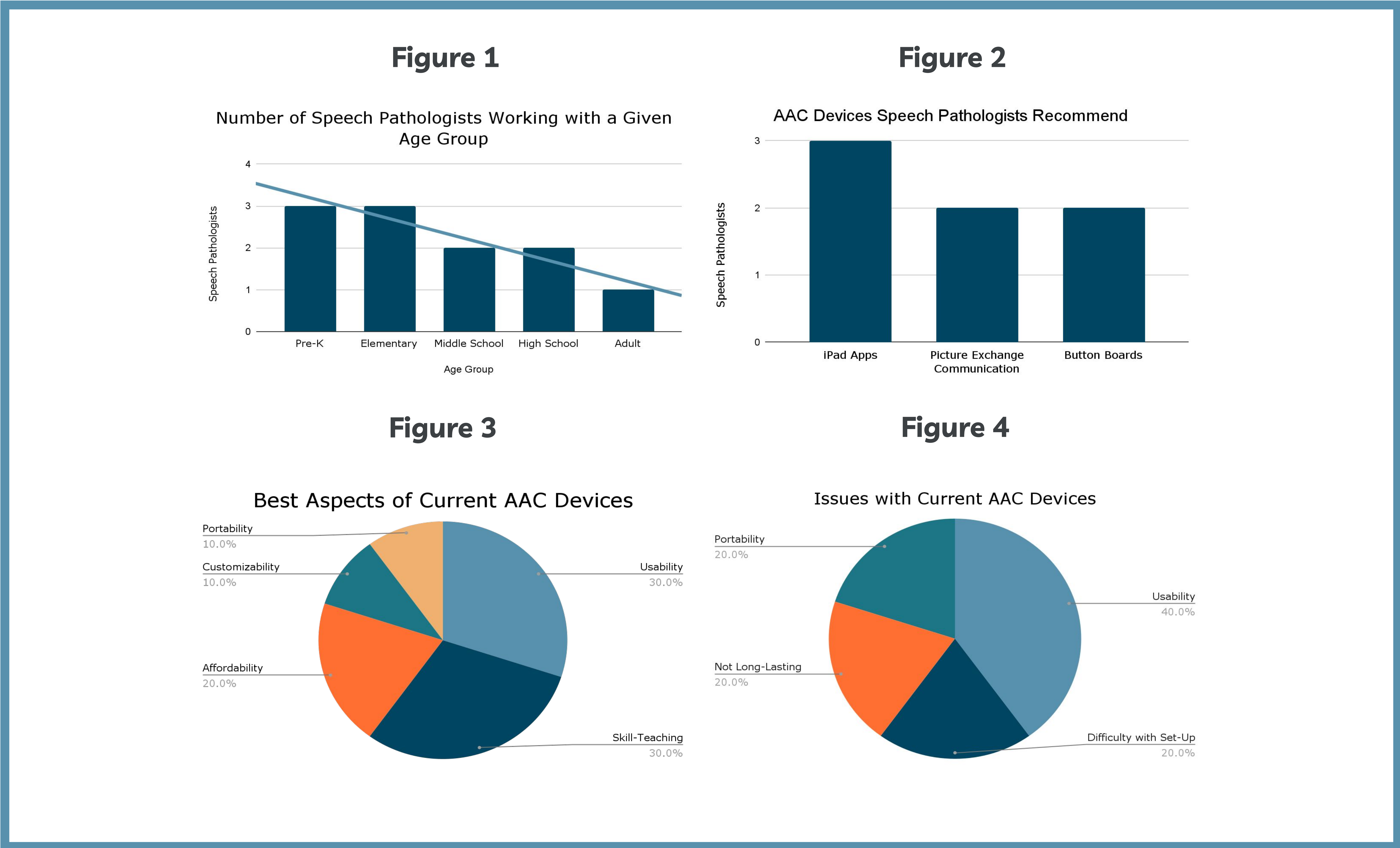
RESEARCH METHODOLOGIES

For data collection, the inquiry approach used was descriptive research in the form of email interviews for observational study. The sample size for speech therapists is small, and three speech-language therapists were reached out to and asked to be interviewed about their opinions on AAC devices. All data was collected by emailing the questions to the respondents and allowing for them to reply when they had the opportunity. Descriptive research was used to look at how the speech therapist's outlook on their students' effectiveness in using AAC devices can be improved and what challenges they are facing. Questions were focused on the effectiveness of AAC devices in the classroom environment.

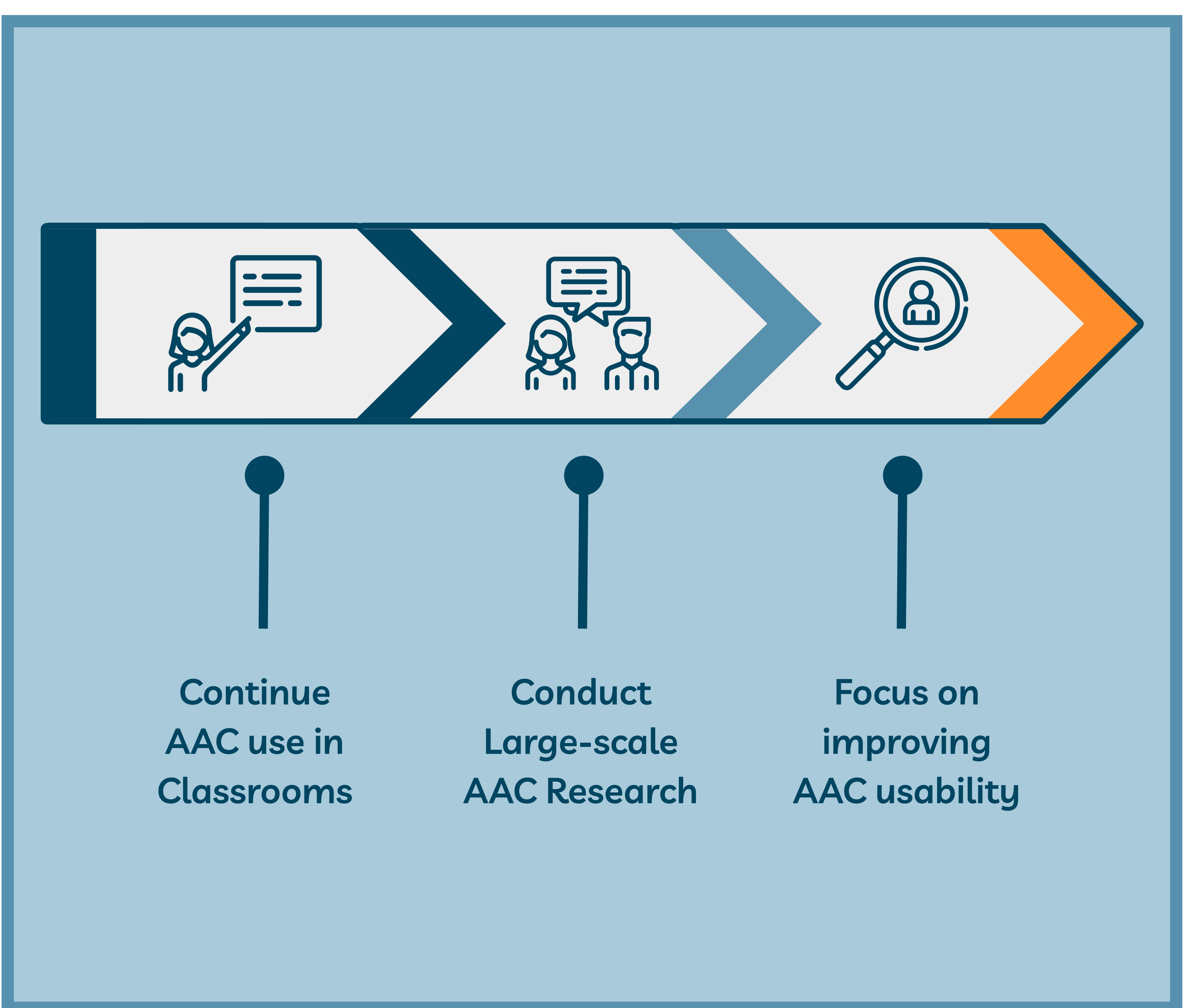
CONCLUSIONS AND ANALYSIS

From the data, it was found that rather than removing AAC device use from school environments, AAC devices can be improved by focusing on usability for younger students. As seen in figure 1, the speech therapists in this study mostly work with younger children, primarily pre-k and elementary school children. Since it is shown that a large amount of students that speech therapists focus on, the main target of improvement for AAC devices would be for children. This would include fixing large problems such as the easy use for children and the issue of distractibility, decrease the ease of use of AAC devices. Although two out of the three speech therapists found that usability was an upside to the use of AAC devices (Figure 3), this was primarily because of the ease for devices such as communication boards for children with lower fine-motor skills. The main issue that speech therapists found was the distractibility of them, with one speech therapist saying that iPads are an inefficient form of communication device due to a difficulty in discerning whether the iPad is a teaching device or toy. Because of this issue, focusing on creating AAC devices as effective as iPad applications without the distractibility of an iPad would enhance use of AAC devices in the classroom, making it easier for students to learn and for speech therapists to teach. Because it is not ethical to stop the use of AAC devices, it is necessary to continue to improve the quality of AAC devices for students.

DATA AND FINDINGS



IMPLICATIONS AND NEXT STEPS



ACKNOWLEDGEMENTS

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