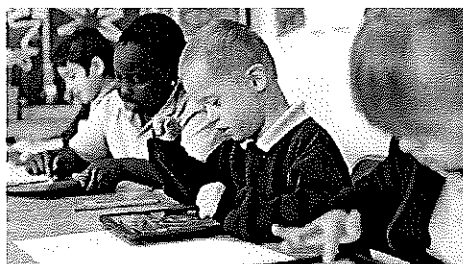


The Effect of a Checklist on School-Based Speech-Language Pathologists' Plans for Augmentative and Alternative Communication (AAC) Assessment



Alpha Birmingham Research MS, CCC-SLP
 Jessica Light, PhD
 Department of Communication Sciences and Disorders
 The Pennsylvania State University

Augmentative and alternative communication (AAC) offers children with complex communication (CCN) needs a way to participate in home, school, and community environments.



(Light & McNaughton, 2012)

The Individuals with Disabilities in Education Act and Section 504 of the Rehabilitation Act require schools to provide assistive technology and AAC for children with CCN...

but many speech-language pathologists (SLPs) are unprepared to provide an effective AAC assessment.



(Costigan & Light, 2010; Ratcliff, Koul, & Lloyd, 2008)

The *SETT* Framework is often used to guide educational decisions related to assistive technology (Zabala, 2005), but it does not completely consider the needs of children with CCN *and* their partners.

The revised Participation Model provides a better framework for AAC assessment.



(Beukelman & Miranda, 2013; Light et al., 1998)

There is a lot to remember, but there is evidence that a checklist will help (Gawande, 2009).

Checklists are used across disciplines to reduce errors of omission and improve outcomes.



(Hales & Pronovost, 2006; Gawande, 2009)

An assessment isn't rocket science or brain surgery, but it is complicated.



(ASHA 2014; Birk et al., 2013)

Research Objective

This study was designed to determine the effect of a checklist on school-based SLPs' plans for AAC assessment.

Method

Design

A pretest-posttest control group design was used to determine the effect of a checklist on school-based SLPs' plans for AAC assessment.

Participants

Twenty school-based SLPs with certification from ASHA and the Pennsylvania Department of Education.

Method

Materials

Demographic surveys: Demographic surveys were used to gather information about the participants' education and experience in AAC.

Case studies: Case studies were used in pre- and posttests. Both case studies described boys with cerebral palsy and CCN.

Checklist: The AAC Checklist was used in intervention.

Questionnaire: Participants in the experimental group completed an open-ended questionnaire about the checklist after the posttest.

The Augmentative and Alternative Communication (AAC) Assessment Checklist
Each assessment item is included in order to help gather information for students who display communication needs (CCN). However, not every item is relevant to every student.

What are the student's communication needs?	What are the student's skills?	What are partner and environmental supports and limitations?
<input type="checkbox"/> What are the student's communication needs? Why does the student need to communicate? How does the student need to communicate? What are the student's communication needs and priorities for the student's family? School?	<input type="checkbox"/> What are the student's communication skills? What are the student's receptive skills? What are the student's expressive skills? What are the student's literacy skills? What are the student's cognitive organization skills? What are the student's social interaction skills?	<input type="checkbox"/> What are partner supports to communication? What are the student's environmental supports to communication? What are the student's environmental limitations to communication? Who is involved in the assessment?

Method

Procedures

Pretest Participants in both groups were asked to *think-aloud* while they planned an assessment for a boy with cerebral palsy (CP) and CCN.

Intervention Participants in the experimental group received the checklist.

Posttest Participants in both groups were asked to *think-aloud* while they planned another assessment for a boy with CP and CCN.

Method

Data Collection

Pre- and posttest plans for were audio recorded and transcribed.

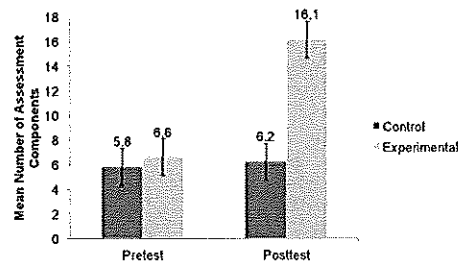
The plans were reviewed and coded based on operational definitions of communication needs, skills, and partner and environmental supports and limitations. The researcher counted the number of different assessment components described in the participants' plans for AAC assessment.

Reliability Twenty percent of the data were randomly selected from each condition and an SLP trained in the operational definitions (and blind to the conditions) coded the transcriptions.

Data Analysis

A mixed analysis of variance (ANOVA) was used to determine interactions between Group and Time (Hancock & Mueller, 2010). A paired-samples t-test was used to determine whether there were statistically significant differences between pre- and posttests in the control and experimental groups (Kirk, 2013).

Results



Results

Pretest

Communication needs

Motor skills
Receptive language
Expressive communication

Working with families and other professionals

Posttest

Communication needs
Priorities for students, families, and professionals

Vision
Hearing
Motor skills
Receptive language
Expressive communication
Literacy
Symbol representation
Partner supports and limitations
Environmental supports and limitations
Working with students, families, and other professionals

The Augmentative and Alternative Communication (AAC) Assessment Checklist
Each assessment item is included based on evidence that it will improve outcomes for students with complex communication needs (CCN). However, not every item is relevant to every student.

What are the student's communication needs?	What are the student's skills?	What are partner and environmental supports and limitations?
<input type="checkbox"/> What are the student's communication needs? Why does the student need to communicate? How does the student need to communicate? What are the student's communication needs and priorities for the student's family? School?	<input type="checkbox"/> What are the student's communication skills? What are the student's receptive skills? What are the student's expressive skills? What are the student's literacy skills? What are the student's cognitive organization skills? What are the student's social interaction skills?	<input type="checkbox"/> What are partner supports to communication? What are the student's environmental supports to communication? What are the student's environmental limitations to communication? Who is involved in the assessment?

"What does the student need to understand? He kind of has to understand one-step directions, hopefully two-step directions. Who does he need to communicate with? His family...his teachers, his friends, his peers, um, you know, anyone...Why does he need to communicate?"

Um, for like, fifty thousand million things...

wants and needs, maybe something's wrong [or] he needs help with something. It says he loves reading with his sisters, so talking about books, making comments, asking questions, he likes watching the World Cup, talking about soccer with people, um, so again, exchanging information, commenting."

"Which communication needs are unmet? His mom can't understand him so I'm thinking communication at home."



"Well the student's priorities are reading and Spider-Man... and whether or not he enjoys going to church on Sunday... [church] would be a priority for his family."

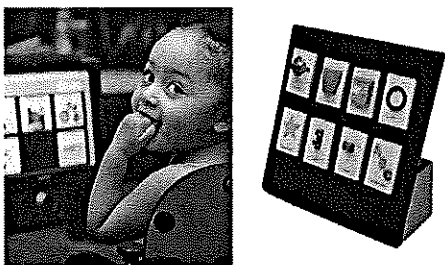


The Augmentative and Alternative Communication (AAC) Assessment Checklist

Each assessment check is printed based on evidence that will require further work to identify with complex communication needs (CCN). Review and confirm.

[illegible]

"Something that I would want to know about would be like visual things...like should I be making sure that the pictures are bigger?"



"Hearing skills...we have to get that checked out. We usually go to the nurse and see if they passed their hearing screenings."



"Receptive skills. You have to maybe modify a test a little bit depending on his motor skills...can he follow one-step directions? Morphology? Sentence structure?"



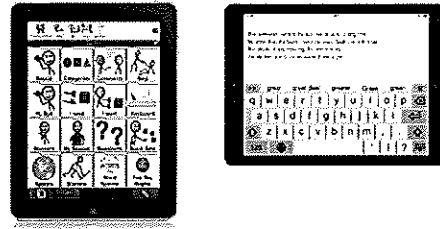
"He uses gestures and speech approximations, but people are not understanding him...so it seems like intelligibility is a big issue."



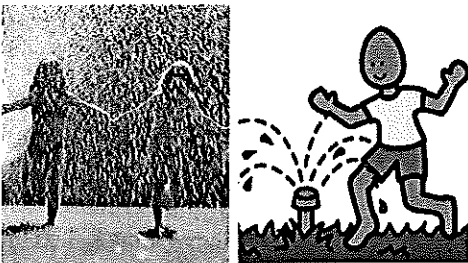
"What are his motor skills? I'm not sure. He [has] some gestures and he might be able to use a switch."



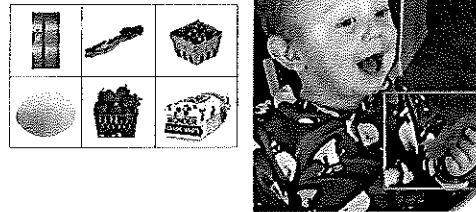
"Another important thing are his literacy skills...we would want to find out if he could read. That might be important...whether to include words on his device."



"What are the student's symbol representation skills? Does [the symbol] have to be a digital picture? Can it be a line drawing? You have to test it out and see what he knows."




"Cognitive organizational skills...you'd have to trial different things, a grid and a visual scene display, and see which one meets his needs."




[illegible]


"What are the partner supports? I'm just thinking that it's important that there are opportunities for communication and that people know different strategies."



"Maybe he participates in Adaptive PE or other activities and it isn't possible to have his high tech device. What can we do to make sure that he still has access to language?"

[illegible]

"Who is involved in the assessment? Student, family, everybody. The whole team, anyone who works with the child...related services, teachers, parents, and family."



Results

Social Validity

Participants in the experimental group completed an open-ended questionnaire about the checklist.

All of the participants reported that they will use the checklist again.

Nine reported that they liked the content of the checklist: *"I like that it walks you through communication needs, student skills, partners and environments- partners especially."*

Six said that they liked its organization and five reported that it reminded them to include important assessment components: *"It helps organize the assessment and makes it less likely that I'll overlook an important item."*

Five reported that they liked that the checklist was brief: *"I love that it's all on one page."*

Results

Social Validity (continued)

Five of the participants reported that they would not change the checklist.
"I wouldn't change anything."

Three of the participants reported that they would change the wording or provide examples: *"I would give examples of partner supports."*

One participant reported that she would expand the checklist: *"If there were links to assessment tests, that would be helpful."*

Discussion

Results

There was a significant effect of the checklist on school-based SLPs' plans for AAC assessment.

Clinical Implications

The checklist reduced errors of omission. This is encouraging because complete assessments might improve interventions for children with CCN and their partners.

Limitations

A significant limitation of the study is its use of case studies. Although they controlled for variability across children with CCN, the results of this study may not generalize to use of the checklist in real life.

Future research is needed to determine the effect of the checklist on teams' plans for AAC assessment in clinical and educational practice, and the effects of the checklist on their decision-making.



Conclusion



For handouts, visit <http://aac.psu.edu>

