

Methodology: Systematic Review and Meta-analysis of the AAC Literature for People with  
Autism Spectrum Disorder or Intellectual Disabilities who have Complex Communication  
Needs through 2020

Appendix C

Full-text Inclusion/Exclusion Coding Sheet

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### **Authors Contribution Statements using Contribution Roles Taxonomy (CRediT)**

Authors were listed alphabetical order by tier with an explanation of the contributions that are indicated for each tier by using CRediT (Allen et al., 2019).

*Tier 1: Ganz, Pustejovsky, Reichle, Vannest (Principal Investigators)*

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**Appendix C**

*Full-text Inclusion/Exclusion Coding Sheet*

Variable	(1) Language	(2) Populations	(3) Intervention	(4) Study design	(5) Outcomes
Code in Rayyan	+foreign language	+wrong pop type	+wrong drug	+wrong study design	+wrong outcomes
	<i>Is the study English?</i>	<i>Does at least 1 participant in the study fit this description?</i>	<i>Does the study include an intervention that includes AAC as a communication mode</i>	<i>Is the study design a single-case experimental design (SCED) or between-groups design?</i>	Social communicative outcomes or challenging (problem) behavior
Description	English	One or more participants with, or instructor providing instruction to someone with, an -intellectual delay -developmental disabilit(ies) (e.g. Angelman syndrome, cerebral palsy, autism spectrum disorder, Down syndrome etc. (IDD), such as Autism spectrum disorder (ASD) Intellectual disability (ID) Other developmental disabilities (DD), who have co-occurring complex	Studies must report the results of an augmentative and alternative communication (AAC) intervention.  AAC includes unaided (e.g., natural gesture, manual sign, sign language, sign system) and/or aided systems (e.g., from low- mid and high-tech applications) to supplement or replace conventional speech for	<b>SCED:</b> <u>Include</u> Multiple Baseline Design (MBD) or multiple probe design (MPD) Reversal/withdrawal Multi-element alternating treatment design Changing criterion design Complex reversal (above mentioned embedded within others)	Communication behaviors will include production of communication via: - AAC (e.g., speech-output communication aid, speech generating device, exchange-based communication system, sign language) - vocalizations or verbalizations (i.e., spoken words or word approximations) - paralinguistic communication (e.g., pitch, intonation, loudness, inflection)

<p>communication needs (e.g., minimally- or non-verbal) mental retardation cognitive disability severe and profound Down syndrome Microcephaly Apraxia Dyspraxia</p>	<p>people with complex communication needs (CCN). Aided Communication includes (e.g., non-exchange and exchange-based systems), high-tech (e.g., SGDs, speech-generating devices (sometimes referred to as voice output communication aid (VOCA), AAC-dedicated devices, tablet-computer AAC apps, and use of multimodal approaches (more than one AAC mode). Display formats can include grid and/or to visual scene display</p>	<p><b>Between-group design:</b>  (Only the following two types of study designs that are eligible for review under the WWC Group Design Standards)  Randomized Controlled Trials (RCTs): use a random process to assign participants or clusters to units. Each unit has a chance of being assigned to every group.  Quasi-experimental Designs (QEDs): QEDs compare distinct groups formed using a nonrandom process</p>	<p>- gestures and/or signs (e.g. gestures, body language, facial expression, affect).  Challenging/problem behaviors will include behaviors that are socially unacceptable and have a history of mediating the actions of others: Behavioral forms include tantrums, repetitive speech/echolalia, physical aggression, screaming, and other disruptive behavior.  Include adult outcomes for implementation (e.g., procedural/ treatment integrity, procedural/ treatment fidelity, social validity, feasibility/acceptability)</p>
<p><u>Exclude</u> Participants that had primary diagnoses of physical impairments  Participants with developmental disabilities other than ASD, who do not report an IQ score demonstrating an intellectual impairment</p>	<p>Include functional communication training (FCT), mention of functional communication that include mention of</p>	<p><u>Exclude</u> Case studies Qualitative studies</p>	<p><u>Exclude</u> Studies that involved only interaction with a computer and no human-to-human interaction; Studies that involve reporting of only academic responses/behavior or communication</p>

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complex communication  
needs (CCN)

Exclude

Intervention to establish  
an activity schedule,  
visual schedule, or task  
analysis with no apparent  
AAC applicability.

comprehension/receptive  
comprehension DVs<sup>1</sup>

No social- communicative  
and/or challenging behavior  
outcomes addressed in the  
study.

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