

High-Tech Augmentative and Alternative Communication for Individuals with IDD and  
Complex Communication Needs: A Meta-Analysis (**Variable Codes**)

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*Operational Definitions of Variable Codes*

<b>Implementer</b>	
Natural	Educator (i.e., school, clinic, or preschool staff, including teacher or paraprofessional), parent/caregiver (i.e., adult family member or paid caregiver, staff at a group home or vocational rehab, or direct service professional), peer/sibling (i.e., an individual near the age of the target individual)
Researcher	Researcher or assistant researcher
<b>Setting</b>	
Natural	Instruction takes place in natural contexts and during natural routines (e.g., free play, meal time, chores, home)
Didactic	Setting outside of a natural routine or activity (e.g., a separate clinic room/therapy room, separate classroom from where the student typically receives instruction, discrete trial training room, speech language room, hallway, or behind partitions set up to decrease distractions)
<b>Behavioral strategies</b>	
Errorless learning	0 second time delay
Time delay	Time delay >0 seconds
Verbal prompts	Verbal phrases used to prompt communication (e.g., “What do you want?”, “Say, ‘__’”, “Let me know if you want anything”)
<b>Age</b>	
Preschool	Under 5 years old
Elementary	5 years old to less than 10 years old OR described as grade K-5
Secondary	10 years old to 21 years old OR grades 6-12
Post-secondary	Older than 21 years old
<b>Primary Diagnosis</b>	
ASD_ID/MR	Described as having a diagnosis of autism spectrum disorder, autistic disorder/autism, high-functioning autism, pervasive developmental disorder, intellectual disability, mental retardation, or IQ score of less than 70 AND commensurate deficits in adaptive behavior overall
<b>Communication functions*</b>	
Needs/wants	Focus is on the object or activity that is desired/not desired; interaction typically ends when it is acquired (or removed if undesired); for example, mands or asking for something.
Social closeness	Focus is on the partner and the interpersonal relationship; the focus is on participation – being together – rather than the actual linguistic content of the interaction; for example, eye contact, smiling, laughing, engaging in conversational turn taking

Exchanging information	Focus is on the information exchanged, including requesting information and providing information; for example, “where is ___”, “what is the weather going to be,” “where is the bus stop?”, “what’s the homework for today?”
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*\*Note:* Definitions are adapted from Light (1989).