

# Evidence-Based Communication Interventions for Persons with Severe Disabilities

National Joint Committee for the Communication Needs of Persons with Severe Disabilities (NJC)

## What is the evidence base for communication interventions for school-age individuals with severe disabilities?

### Method

#### Electronic Databases Searched:

- CINAHL
- Combined Health Information Database
- ERIC
- Education Abstracts
- Exceptional Child Education Resources
- Health Source: Nursing
- Linguistics and Language Behaviour Abstracts
- PsycARTICLES
- PsycINFO
- PubMed
- Science Citation Index
- ScienceDirect
- Social Science Citation Index

#### Search Criteria:

- English language only
- Date of publication 1975 to 2006
- No case studies
- Intervention studies only
- Participants having a severe disability- including persons with severe to profound mental retardation, autism, and other disorders that result in severe socio-communication and cognitive communication impairments

#### Search terms included:

Augmentative or Alternative Communication (AAC); Augmentative Communication; Communication; Emergent communication; Nonsymbolic communication; presymbolic communication; Emergent symbolic communication; Intentional communication; Speech Generating Devices (SGDs); Mental Retardation; Autism; Autistic Spectrum Disorders (ASD); Pervasive Developmental Disorders (PDD, PDD-NOS); Rett's Syndrome; Childhood Disintegrative Disorder; Developmental Disabilities; Handicap; Traumatic Brain Injury; Cognitive impairment; Severe disabilities; Severe and/or profound disabilities; Multiple disabilities; Sociocommunication; cognitive communication impairment; Early intervention; Literacy; Language – verbal, nonverbal, expressive, receptive, written...

**47 studies that met above criteria and that had at least one participant of school age (birth to 21) were reviewed for this poster**

- An annotated bibliography for all 47 articles is available from the ASHA website.

**Article review procedures**

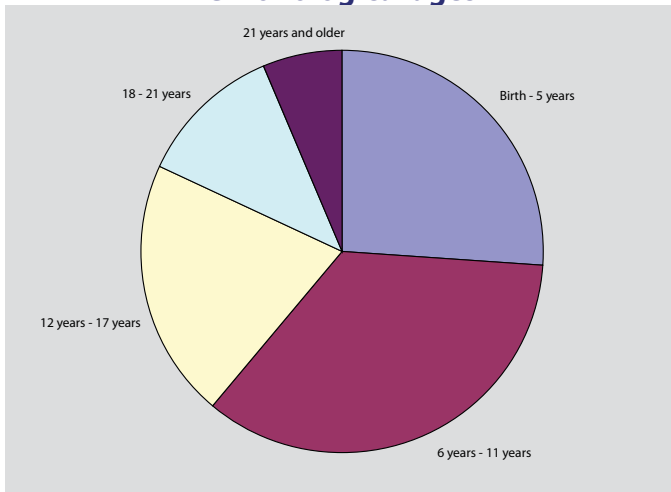
- Each committee member reviewed 5 articles and entered results into Zoomerang® Survey Software.
- Reliability established for 20% articles using consensus procedures

**Results**

**When were the studies published?**

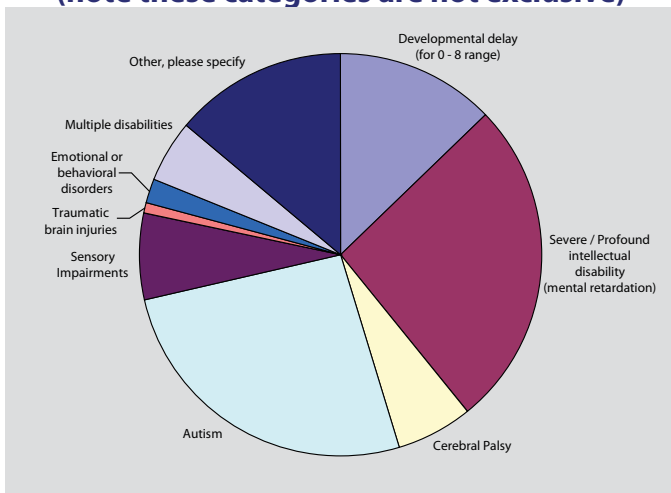
- 5 between 1975-1985
- 16 between 1986-1995
- 26 between 1996-2006

**Chronological ages**

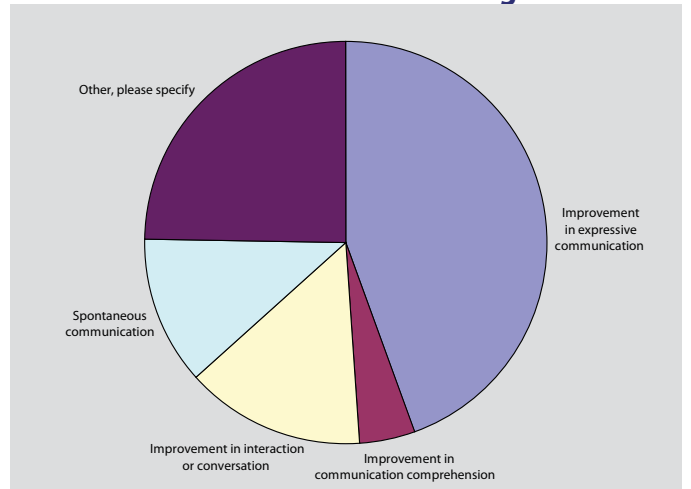


**Type of Disability**

(note these categories are not exclusive)

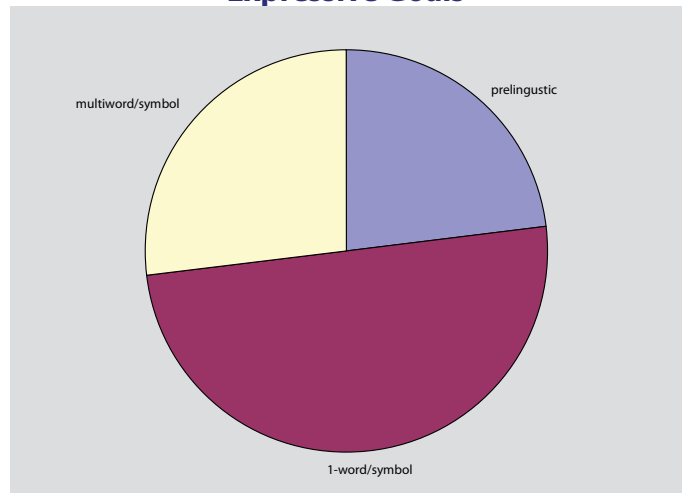


**What were the intervention goals?**

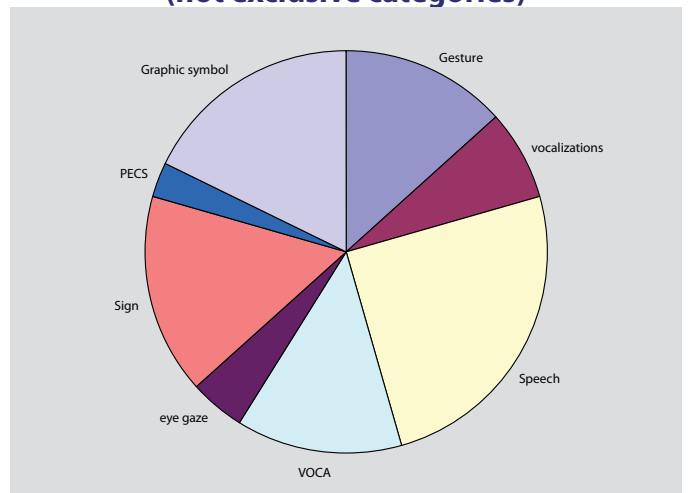


Six articles also measured conversational goals such as initiating questions, turn taking or maintenance of interaction

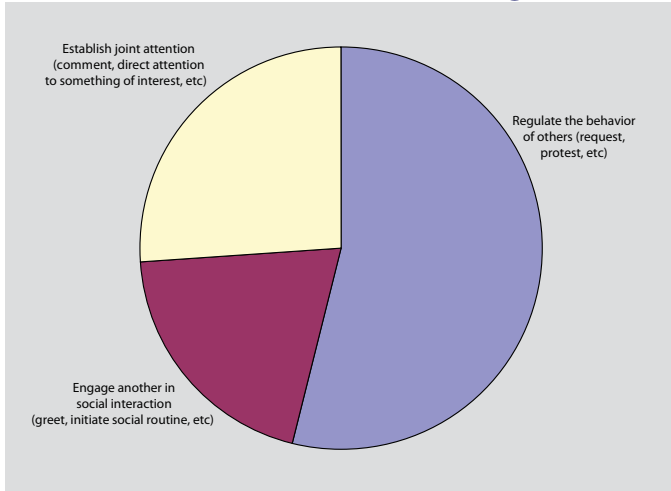
**Expressive Goals**



**Communication forms targeted (not exclusive categories)**

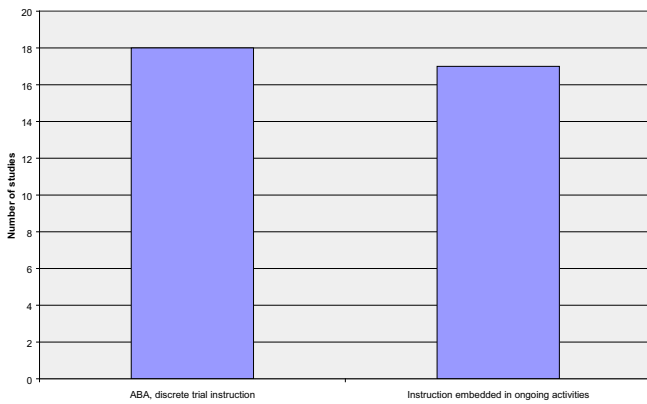


## Communication functions targeted

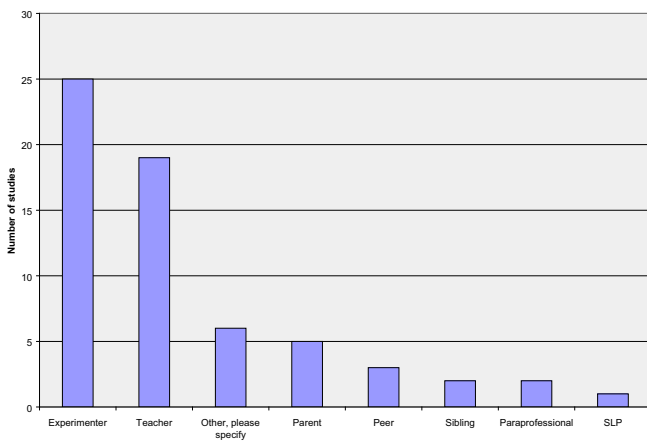


## What were the characteristics of the interventions?

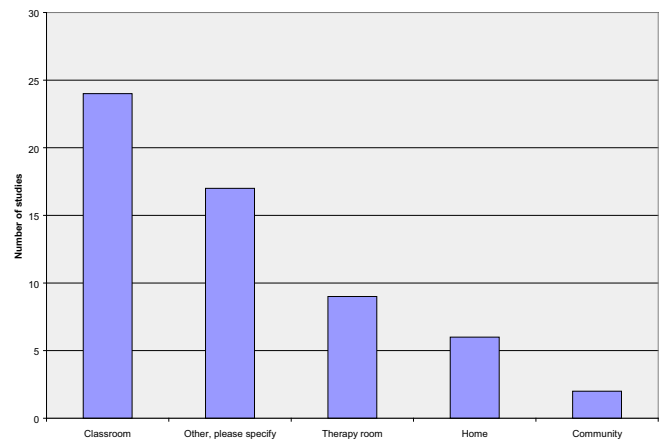
Instructional methods



## Who provided intervention?

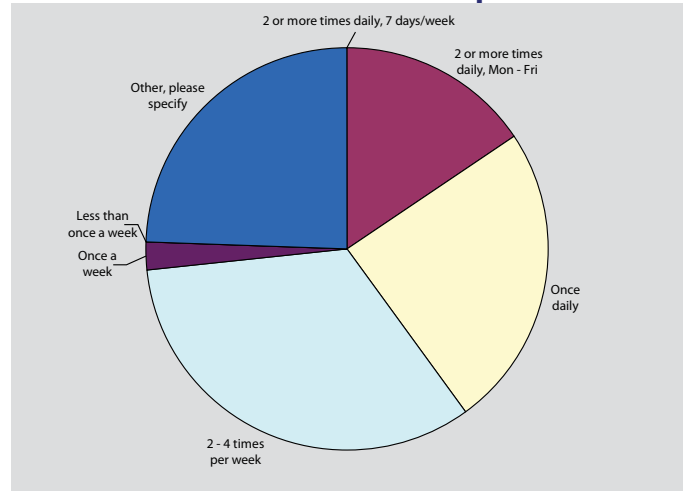


## Where did intervention take place?

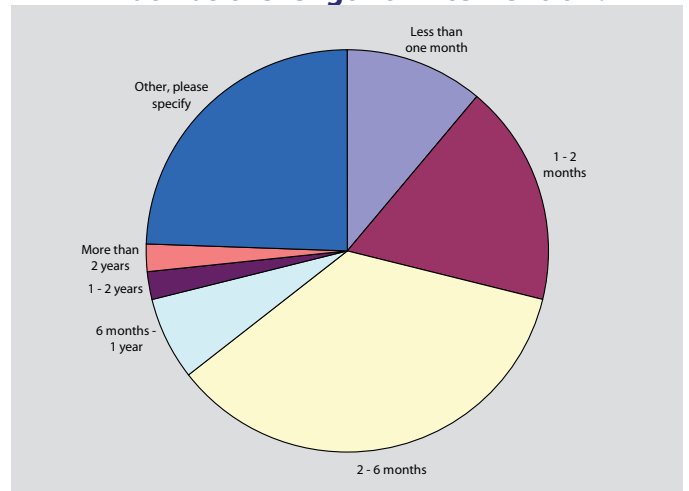


Examples of "other" included cafeteria, playground, hallway and bathroom

## How often was intervention provided?



## What was the length of intervention?



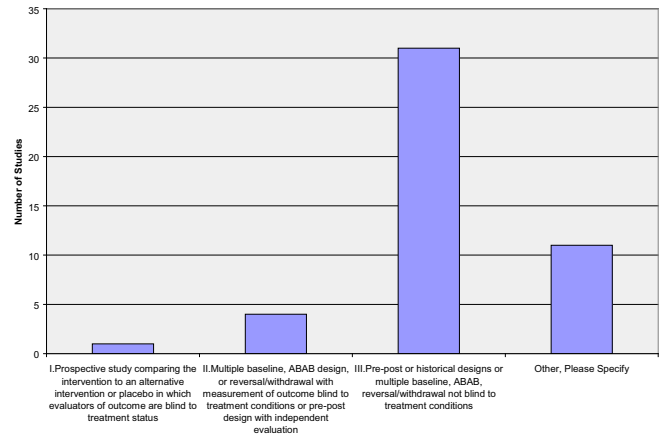
"Other" included a number of sessions or trials to criterion without corresponding calendar length

## Study Design Elements

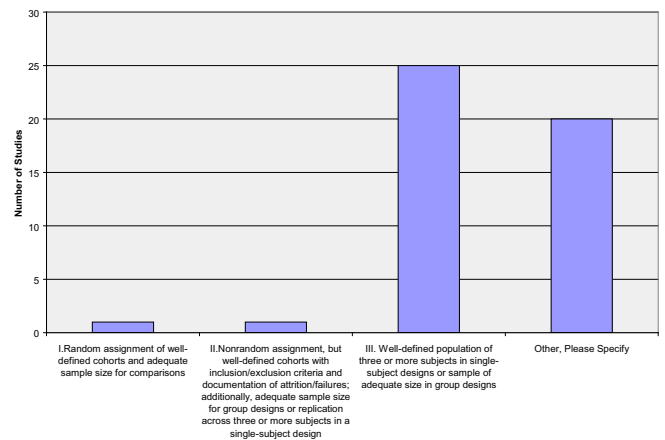
- 91% studies reported inter and/or intra rater reliability
- 20% studies measured social or ecological validity
- 33% studies measured fidelity of treatment

## What is the quality of evidence according to National Research Council Standards (National Research Council, 2001)?

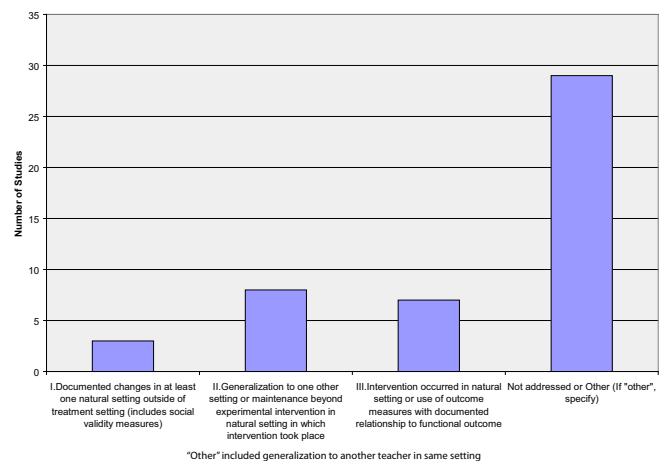
### Internal Validity: Control for factors such as maturation, expectancy, experimenter artifacts



### External Validity/Selection Biases



### Generalization



"Other" included generalization to another teacher in same setting

## Summary and Conclusions

- In this sample, most participants were under 11, male and had severe to profound disabilities and/or autism
- Interventions were usually provided: in the classroom, by an experimenter or teacher, between 2-5 days per week, over a course of 1-6 months.
- Intervention targets were typically single word, sign or symbol responses and rarely focused on linguistic productions
- Inter- or intra- reliability was typically reported but social validation and generalization data typically were not reported
- The majority of studies used single subject designs with well-defined populations of 3 or more participants, but did not specify that measures were obtained from individuals blind to treatment conditions
- This partial review suggests a need for intervention studies that include measures from blind observers and better controls for threats to internal and external validity, and that address generalization and maintenance of targeted communication responses
- Further review of extant literature is needed to identify, describe, and compare effective interventions for persons with severe disabilities

## References

National Research Council. (2001). *Educating children with autism: Committee on educational interventions for children with autism. Division of behavioral and social sciences and education.* Washington, DC: National Academy Press.

For more information about the NJC including products available,  
please visit

[www.asha.org/njc/](http://www.asha.org/njc/)