Data Entry Instrument for NJC Research Article

"Twenty Years of Intervention Research on the Communication Interaction of Individuals Who Have Severe Disabilities"

NJC Evidence-Based Practices Data Entry Instrument (June 2008)

Note: Asterisks indicate items that were found to have inter-observer agreement < 70%.

PART I: REVIEWER & ARTICLE INFORMATION [Items 1 – 2]

Question 1. Reviewer:
Question 2:
Article
Author(s):
Publication Year (Must be 1987 or later):
Journal:
Volume (**Issue**) numbers:
Pages:

PART II: CRITERIA FOR INCLUSION OF STUDY [Items 3 - 7]

Question 3: Does article describe an intervention or treatment? Note that we are not including descriptive studies of individual or population characteristics

Question 4: If you answered "No" to question # 3, was this article a systematic review of relevant communication intervention studies?

Question 4: Additional Comment

Question 5: Does study include **one or more individuals, of any age, with severe disabilities**, for whom intervention results can be identified and distinguished from those of any participants with mild or adult-onset disabilities? *For purposes of this review, we are defining individuals with severe disabilities as: Individuals who have developmental or acquired disabilities,* **manifest before age 18**, *that result in* **severe socio-communication and cognitive communication impairments** .*This determination should be made on the basis of the information provided by authors, e.g., information about intellectual disability and speech/language, relative to chronological age, in order to determine presence of a severe disability. We will err on the side of inclusion.* Notes: <u>If IQ scores are given, scores must be 44 or below</u>, if participants are described as severe and don't give an IQ then accept them; if CA is 5 or less, child's language age has to be half their chronological age or worse– otherwise a language age of 30 months (or lower) for everyone over age 5 qualifies them (can use either receptive or expressive or both).

Question 6: Does treatment address one or more areas of communication performance? Communication intervention studies are those where an individual is taught to understand and/or produce communication messages to a communication partner using any mode including graphic, natural gestures, sign language, speech, PECS, etc. addressing one of the following functions: requesting, commenting, protesting, conveying social niceties, answering questions, repairing after a breakdown). Thus, studies teaching someone to make a response to get something or some social

response from another person would be included. Teaching someone to emit a response to obtain some reinforcement not related to the response would not be reviewed.

Question 7: If you answered "No" to question # 6, above, please indicate whether the study did involve intervention focused on literacy/pre-literacy skills (e.g., letter recognition, print word matching), and/or skills considered prerequisite or components of communication (e.g., verbal or gestural imitation).

- ☐ Literacy skills
- ☐ Component skills

PART III: DESCRIBE STUDY [Items 8 - 12]

Question 8: Number of Participants with severe disability? Count only those with severe disabilities as participants (number, age, gender, etc.) _____

Question 9: Number of males with severe disabilities___

Number of females with severe disabilities ____

Question 10: Ages of participants (check all that apply). Note: If participant ages are reported with means, and if standard deviations are given, then you should calculate the ranges of ages and check below)

- ☐ Birth - through 5 yrs,11mos
- ☐ 6 years - through 11 yrs, 11mos
- ☐ 12 years - through 17 yrs, 11mos
- ☐ 18 - through 20 yrs, 11mos
- ☐ 21 years and older

Question 11: Specific age(s) or Age Range_____

Mean age (if available) _____

Question 12: Diagnoses / disabilities of participants with severe disabilities, as identified by author(s) (check all that apply)

- ☐ Developmental delay (for 0 - 8 range) or Intellectual Disability (mental retardation): Check ID or DD by looking at developmental scores and discrepancy with chronological age unless mentioned specifically; alternately you can use descriptions of behaviors and communication that indicate a severe delay
- ☐ Cerebral Palsy

- ☐ Autism Spectrum Disorder (PDD counts; autistic-like)
- ☐ Sensory Impairments
- ☐ Traumatic brain injuries
- ☐ Emotional or behavioral disorders
- ☐ Multiple disabilities: 2 or more disabilities appearing at the same time which cause such severe educational needs; limited to DD/ID plus CP and /or Sensory; Deaf blind would get sensory plus multiple
- ☐ Specific genetic disorder/syndrome-identify below: must be specific genetic disorder, does not include seizures; if check Downs syndrome will also check DD/ID (Rule: will always check DD/ID or Autism or both [which would not be 'multiple disabilities'] or the participant is out. If a genetic syndrome this is additional information.)

  Specific genetic disorder/syndrome _____

PRETREATMENT COMMUNICATION CHARACTERISTICS OF PARTICIPANTS (Items 13 - 15)

Question 13: EXPRESSIVE COMMUNICATION LEVELS -- Check all that apply

- ☐ Multiword (non-echolalic), >50 words, in any mode (This is the highest category so to check this one you need to have evidence of both criteria.)
- ☐ Emerging language, AND/OR reported ELA 18-30 months
- ☐ Prelinguistic communication, no real words in any mode: can include challenging behavior that functions as being communicative; AND/OR reported ELA 18months
- ☐ Other, please specify: Echolalia is always other with a little description; but if author describes some functional language use, check other (for the echolalia) plus another category; include challenging behavior in item 14 other.
- ☐ Not reported

Question 14: COMMUNICATION MODES: Reported modes used by participants with severe disabilities at the start of this study (Check all that apply)

- ☐ Speech
- ☐ AAC- Unaided (e.g., ASL, SEE)
- ☐ AAC device with speech output

- ☐ AAC device with no speech output
- ☐ Gestures / vocalizations (non-symbolic): includes everything presymbolic (nonconventional or conventional)
- ☐ Other [Describe -may include challenging behavior]_____
- ☐ Not reported

Question 15: RECEPTIVE COMMUNICATION LEVELS: What were the reported comprehension or receptive language abilities of study participants? Check all that apply

- ☐ Does not respond to communication; AND/OR reported Receptive Language Age (RLA) <9 months
- ☐ Follows simple directions (verbal &/or gestural); AND/OR reported RLA 9 - 18 months
- ☐ Understands a few single words; AND/OR reported RLA 18 - 30 months
- ☐ Understands grammatical constructions (morpheme or syntax distinctions, etc.); AND/OR reported RLA > 30 months
- ☐ Not reported

DEPENDENT VARIABLES: COMMUNICATION MEASURES (Items 16 - 21)

Question 16: WHAT ASPECTS OF COMMUNICATION PERFORMANCE WERE MEASURED AS OUTCOMES OF TREATMENT IN THIS STUDY? (Check all that apply)- Look at actual data reported in tables and graphs: the four options in item 16 are elaborated upon in 17, 18, 19. Outcomes measures must be limited to target child measures. This information for item #16 has to be reported in article or item #6 would not have been checked.

- ☐ Improvement in expressive communication/expressive language (if you check this then you may need to answer 17, 18, and 20)
- ☐ Improvement in communication comprehension/ receptive language (if check this then may check item 19)
- ☐ Improvement in interaction or conversation (if check this you may check item #21)
- ☐ Other, please specify _____

Question 17: EXPRESSIVE COMMUNICATION MODE[S] MEASURED: If intervention targeted expressive communication OUTCOMES, what mode[s] were measured? (Check all that apply). Check this item only if you checked the first item in 16. In order to check an item there must be data specifically related to that item reported as a dependent variable or outcome of the intervention

- ☐ Speech

- ☐ AAC- Unaided (e.g., ASL, SEE)
- ☐ AAC device with speech output
- ☐ AAC device with no speech output
- ☐ Gestures / vocalizations (non-symbolic)
- ☐ NA/ Not measured

Question 18: EXPRESSIVE COMMUNICATION LEVEL[S] TARGETED: What level[s] of expressive communication were measured as outcomes of this intervention. Check all that apply.

Remember that prelinguistic can be checked along with emerging or multiword if this level is also targeted.

- ☐ Multiword (non-echolalic); non-rote combination of 2 or more words/symbols - grammatical constructions
- ☐ *Emerging language-- single words (any mode), or rote word combination (e.g., 'Thank You")
- ☐ *Prelinguistic communication, no real words in any mode
- ☐ NA/ Not measured

Question 19: RECEPTIVE COMMUNICATION MODE[S] TARGETED: If receptive communication was a targeted outcome of this intervention, in what mode(s) was this tested? (Check all that apply).

- ☐ Speech
- ☐ Unaided AAC mode (e.g., ASL)
- ☐ Aided AAC mode with speech output
- ☐ Aided AAC mode with no speech output
- ☐ Gestural or contextual communication
- ☐ NA/ Not measured

Question 20: OUTCOME MEASURES OF COMMUNICATION FUNCTION: If functional communication was targeted in this intervention, what specific function[s] were measured? (Check all that apply): authors describe a communicative function that they measure; or the actual target

behavior measured is linked to a function (reported in results as narrative or data reported in tables or graphs).

- ☐ Regulate the behavior of others (request, protest, etc)
- ☐ Engage another in social interaction (greet, initiate social routine, etc)
- ☐ Establish joint attention (comment, direct attention to something of interest, etc)
- ☐ NA/ not measured

Question 21: INTERACTION/ CONVERSATION OUTCOME MEASURES: If interactional or conversational skills were targeted as outcomes of this intervention, which skills were measured as dependent variables? (check all that apply)

- ☐ Turn taking (e.g., reciprocal interactions, defined as one child's positive initiation followed by the partner's positive response within 3 seconds, James & Egel, 1986)
- ☐ Joint attention: Shared focus of an interaction is measured
- ☐ Imitation
- ☐ *Initiation/spontaneous: Means that "emitted independently without prompting" was measured; may be inferred.
- ☐ Repair
- ☐ Topic maintenance
- ☐ *NA/ Not measured
- ☐ Other, please specify

Question 22: OTHER INFORMATION ABOUT STUDY DESIGN (Items 22 - 34)
Did this study measure inter-rater reliability? __

Question 23: Did this study measure intra-rater reliability? (Note: includes test-re-test reliability within a single individual)__

Question 24: Did this study evaluate SOCIAL OR ECOLOGICAL VALIDITY of intervention? (i.e., any measure of acceptability or benefit of intervention from perspective of others who interact with participant[s]?) ___

Question 25: Did this study evaluate the FIDELITY OF TREATMENT --i.e., evidence that experimental conditions were actually implemented as described? Note: Some aspect of treatment fidelity must be measured and reported to be checked ___

Question 26: Did this study specifically address CHALLENGING BEHAVIOR? Note: "Specifically addressed" means that challenging behavior was measured during baseline and intervention and reported in results____

Question 27: Did this study include any measure of generalization (generalization to new partners, settings, stimuli, responses, etc.)? ____

Question 28: Did this study include any measure of maintenance? (This item refers to long term maintenance of target skill[s] at some period of time after conclusion of treatment - to count as maintenance, must be measured at least 3 months after all intervention has been completed)____

Question 29: INTERVENTION SETTING (Check all that apply)

- ☐ Classroom: student's own classroom; if not a participant's classroom (e.g., an empty classroom) then check "Other"
- ☐ Home
- ☐ Pull out environment: --Includes therapy room (SLP or OT/PT room) or experimental room
- ☐ Community
- ☐ Other, please specify _____-

Question 30: TREATMENT IMPLEMENTATION METHOD (Check all that apply)

- ☐ Individual
- ☐ Group
- ☐ *Massed trial: One trial follows the next trial; trials scheduled by session rather than by natural opportunity
- ☐ Distributed trial: Teaching as part of a routine; trials are separated by variable amounts of time.
- ☐ Decontextualized/ removed from natural communication environment: Contrived for study rather than under natural conditions; pull out; conditions are manipulated according to time, setting, individuals present that are strikingly different than scheduled routines
- ☐ *Contextualized/ conducted in natural communication environment: Generally natural but experimenter can set up preferred materials in a classroom play area in their environment; check here if probes are conducted under natural conditions.
- ☐ Other, please specify

Question 31: PERSON[S] DELIVERING INTERVENTION (Check all that apply)

- ☐ Parent
- ☐ Teacher
- ☐ Paraprofessional
- ☐ SLP
- ☐ Sibling
- ☐ Peer
- ☐ Experimenter (incl. Research or Grad. Assistant)
- ☐ Other, please specify_____

***Question 32:** FREQUENCY

- ☐ 2 or more times daily, 7 days/week
- ☐ 2 or more times daily, Mon – Fri
- ☐ Once daily
- ☐ 2 - 4 times per week
- ☐ Once a week
- ☐ Less than once a week
- ☐ Can not determine

***Question 33: DURATION OF TRAINING:** Note: Only count duration of actual treatment or intervention phase -- do not include non-treatment baseline, maintenance, or generalization phases. To answer this item, you need the author to have clearly stated the treatment duration; or you must be able to easily calculate it from the figures/graphs. Otherwise, select "Can not determine".

- ☐ Less than one month
- ☐ 1 - 2 months
- ☐ 2 - 6 months
- ☐ 6 months - one year
- ☐ 1 - 2 years
- ☐ More than 2 years
- ☐ Can not determine

Question 34: EXPERIMENTAL DESIGN (Select one answer that best fits this study)

- ☐ EXPERIMENTAL - GROUP (Treatment group compared with control or contrast group)
- ☐ EXPERIMENTAL- SINGLE SUBJECT (Experimental effect demonstrated using specific N=1 design - e.g., multiple baseline, alternating treatments, etc.)

- ☐ QUASI-EXPERIMENTAL (Non-equivalent control group; pre-post measures, with no control group, single subject time series with no experimental control, etc.)

- ☐ CASE STUDY OR QUALITATIVE (No experimental controls; no evidence of reliability/validity of data reported)

Question 35: RESULTS REPORTED (Items 35 - 37) IMMEDIATE RESULTS: Did this study report positive, immediate results of the intervention? _____

Question 36: LONG TERM EFFECTS: Did this study report positive, long term results/ maintenance of effects of the intervention? (Long term/maintenance means at least 3 months after all intervention has been completed)

- ☐ Yes
- ☐ No
- ☐ Not Measured

PART IV: EVALUATION OF QUALITY OF EVIDENCE PROVIDED BY THIS STUDY (Items # 37 - 39; adapted from NRC criteria)

***Question 37:** **I**nternal Validity: Control for nonspecific factors, such as maturation, expectancy, experimenter artifacts

- ☐ I. Prospective study comparing the intervention to an alternative intervention or placebo in which evaluators of outcome are blind to treatment status
- ☐ II. Multiple baseline, ABAB design, or reversal/withdrawal with measurement of outcome blind to treatment conditions or pre-post design with independent evaluation
- ☐ III. Pre-post or historical designs or multiple baseline, ABAB, reversal/ withdrawal not blind to treatment conditions
- ☐ Other, Please Specify

***Question 38:** External Validity/Selection Biases

- ☐ I. Random assignment of well-defined cohorts and adequate sample size for comparisons
- ☐ II. Nonrandom assignment, but well-defined cohorts with inclusion/exclusion criteria and documentation of attrition/failures; additionally, adequate sample size for group designs or replication across three or more subjects in a single-subject design
- ☐ III. Well-defined population of three or more subjects in single-subject designs (Note that well defined refers to single subject designs only); or a sample of adequate size in group designs
- ☐ Other, Please Specify _____

***Question 39:** Generalization (Rating options I, II and III refer specifically to <u>setting</u> generalization; if study did not report setting generalization, but did report other type of generalization [e.g., response generalization], then check "Other", and specify type of generalization)

- ☐ I. Documented changes in at least one natural setting outside of treatment setting (includes [i.e., must include] social validity measures)
- ☐ II. Generalization to one other setting or maintenance beyond experimental intervention in natural setting in which intervention took place. (Note if there is social validity in addition to generalization, then score as I.)
- ☐ III. Intervention occurred in natural setting or use of outcome measures with documented relationship to functional outcome [second clause here is not well defined -- we will ignore this option]
- ☐ Not addressed or Other (If "other", specify)