

The University of Delaware Winging It! Improvisation Workshop:

Impact on Conversational Turn-Taking with
Adolescents with Autism Spectrum Disorder

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Winging It! Workshop at UD



INTRODUCTION

Autism Spectrum Disorder (ASD)

- Range, or spectrum, of neurodevelopmental disorders
(American Psychiatric Association, 2013)
- Difficulty with social interactions and social communication skills, including:
 - Conversational turn taking
 - Theory of Mind
 - Understanding/expressing emotions

(Wilson, et. al., 2019)

Current Evidence

- Limited research on effective interventions for adolescents with ASD
- WHY is this important?
 - Transition to adulthood
 - Decreased participation in recreational/social activities → less social interactions → poor social outcomes (unemployment, increased stress)

(Howlin, et. al. 2004), (Orsmond, Krauss, Rutter, 2004)

Theatre-Based Interventions

- Theatre encourages targeting and practice of skills:
 - Expressing and understanding emotions
 - Body movement/awareness
 - Individual expression
 - Use of gesture and eye contact
 - Listening to others
 - Taking the perspective of another
- Use of role-playing, improvisation, and dancing

(Dubie, 2009)

Evidence for Theatre-Based Interventions

- Corbett et. al. (2011; 2014; 2014) results demonstrated
 - Improved:
 - Theory of Mind skills
 - Social awareness
 - Social cognition
 - Increased self-confidence
 - Responsiveness to others
 - Cooperation with others
 - Comfort when speaking
 - Reduced cortisol levels

Essential Question

Will a theatre-based intervention affect the number of initiations and conversational turns taken with communication partners?

Language Environment Analysis (LENA)

- LENA devices – recorded and analyzed reciprocal conversation
- Recordings obtained on the following days:
 - Day 2 and Day 3 = Week 1
 - Days 7 and Day 8 = Week 2

Language Sample Transcriptions

- 12 hours of audio recordings were transcribed to obtain language samples
- Coded and analyzed using Systematic Analysis of Language Transcripts (SALT)
- Codes were broken up into two sets:
 - Utterances produced during spontaneous conversation
 - Utterances produced during structured activities

Coding for Language Samples

Code	Description
INU	Initiation of conversation with an unknown person or the group as a whole
INP	Initiation of conversation with a peer
INA	Initiation of conversation with a facilitator, graduate student, or clinician
CTU	Conversational turn taken with an unknown communication partner/group conversation
CTP	Conversational turn taken with a peer
CTA	Conversational turn taken with a facilitator, graduate student, or clinician
C	General comment made with no interpreted initiation or known conversation taking place (often included comments to self)

Table 1. Spontaneous utterance codes used in analysis of language samples.

Coding for Language Samples

Code	Description
STIM- INU	Initiation with an unknown communication partner or the group as a whole, which may include: <ul style="list-style-type: none">• Volunteering new ideas to the group• Offering an insightful comment• Adding novel thoughts to a group discussion/conversation
STIM- INP	Initiation of a conversation with a peer during a structured activity
STIM- INA	Initiation of a conversation with a facilitator, graduate student, or clinician during a structured activity, including: <ul style="list-style-type: none">• Asking facilitators questions regarding the structure/rules of an activity
STIM- CTU	Conversational turn taken with an unknown communication partner or the group as a whole during a structured activity
STIM- CTP	Conversational turn taken with a peer during a structured activity
STIM- CTA	Conversational turn taken with a facilitator, graduate student, or clinician during a structured activity
STIM-G	Response from the entire group to demonstrate participation with the activity

Table 2. Codes used for language sample analysis during structured improvisation and theatre-based activities.

Results

Week 1					Week 2			
	01/07	01/09	Total	Percentage?	01/14	01/15	Total	Percentage
# conversational turns	150	286	436	48% utterances were conversational turns	219	147	366	47%
# conversational turns with adults	71	111	182	42% of conversational turns with adults	176	98	274	75%
# of conversational turns with peers	50	129	179	41% of conversational turns with peers	34	18	52	14%
# of initiations	74	83	157	17% of utterances were initiations	75	78	153	20%
# of initiations with adults	18	31	49	31% were initiations with adults	37	17	54	35%
# of initiations with peers	15	21	36	23% were initiations with peers	25	13	38	25%
# of words total	2457	3414	5871		2339	2105	4444	
# of utterances in sample	382	533	915		413	365	778	
# of spontaneous utterances made	217	295	512	56% of utterances were spontaneous	261	168	429	55% spontaneous
# of utterances during structured activities	107	172	279	30% of utterances were in Improv/structured activities	70	97	167	21% improve-structured

Results



Increased percentage of initiated utterances (overall)



Increased # of initiated utterances with peers



Increased # of initiated utterances with clinicians



Maintained conversational turns taken (overall)

Results Discussion

- Environmental factors:
 - Age-related
 - Mid-term week
 - Participant refusal to participant
- Limitations:
 - Limited research on LENA and adult-to-adult interactions
 - Transcription errors
 - Structure of workshop – Free time vs structured
 - Sample size
- Benefit of Improvisation

Comments/Questions



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