Online Supplementary Materials, Biggs, et al. "Enhancing peer network interventions for students with complex communication needs." *Exceptional Children*

Table 1. *Characteristics of Planning Team and Peer Network Members*

	Sex	Age	Race/ethnicity	Education	Years known	Years experience
Sara						
Mother	Female	44	Hispanic	High school	-	-
*Paraprofessional	Female	41	White	Associates	< 1	2.5
Special educator	Female	30	White	Bachelor's	< 1	5
SLP	Female	32	White	Master's	2	2
Peer	Female	9	Black	4th grade	1	-
Peer	Female	10	White	4th grade	3	-
Peer	Male	9	White	4th grade	2	-
Grace						
Father	Male	35	White	Bachelor's	-	-
*Paraprofessional	Female	61	White	Bachelor's	1	17
Special educator	Female	28	Hispanic	Master's	2	5
SLP	Female	32	White	Master's	2	2
Peer	Female	8	White	3rd grade	2	-
Peer	Female	8	White	3rd grade	2	-
Peer	Female	8	Asian	3rd grade	4	-
Peer	Female	8	Hispanic	3rd grade	1	-
Jeremy						
Mother	Female	51	White	Some college	-	-
*Paraprofessional	Female	46	White	Bachelor's	4	5.5
Special educator	Female	23	White	Bachelor's	1	1
SLP	Female	26	White	Master's	2	3
General educator	Female	33	White	Master's	1	5
Peer	Female	9	White	4th grade	2	-
Peer	Female	9	Black	4th grade	< 1	-
Peer	Male	10	White	4th grade	2	-
Joanna						
Mother	Female	40	Hispanic	Some college	-	-
Father	Male	47	Hispanic	Some college	-	-
*Paraprofessional	Female	62	Black	Some college	2	9
*Sub. paraprofessional	Female	47	White/Asian	Some college	< 1	< 1
Special educator	Female	30	White	Bachelor's	< 1	5
SLP	Female	27	White	Master's	< 1	3
Peer	Female	9	White	4th grade	1	-
Peer	Female	10	White	4th grade	< 1	-
Peer	Female	10	Asian	4th grade	4	-

Note. *Denotes intervention facilitator. Education = highest level of education or current grade (for peers); SLP = Speech language pathologist; Years known = number of years the individual had known the focus student prior to the study; Years experience = number of years of experience in current position and similar position.

Table 2. *Procedural Fidelity by Participant and Experimental Phase*

Fidelity item	Sara BL	Sara PN	Sara PN+M	Grace BL	Grace PN	Grace PN+M	Jeremy BL	Jeremy PN	Jeremy PN+M	Joanna BL	Joanna PN	Joanna PN+M
Intervention fidelity checklist[a]												
The student was present for the entire session.	–	85.7	88.9	–	100.0	100.0	–	100.0	100.0	–	100.0	100.0
The AAC device was in proximity the majority of the session.	–	100.0	100.0	–	100.0	100.0	–	87.5	100.0	–	100.0	100.0
Materials were provided for a shared activity.	–	100.0	100.0	–	100.0	100.0	–	100.0	100.0	–	100.0	100.0
Peers participated in the shared activity appropriately.	–	100.0	100.0	–	100.0	100.0	–	100.0	100.0	–	100.0	100.0
The student participated in the shared activity appropriately.	–	100.0	100.0	–	100.0	85.7	–	85.7	100.0	–	100.0	100.0
The facilitator was present during the session.	–	100.0	100.0	–	100.0	100.0	–	100.0	100.0	–	100.0	100.0
The facilitator encouraged interactions using facilitation strategies.	–	100.0	100.0	–	100.0	100.0	–	100.0	100.0	–	85.7	100.0
The facilitator encouraged students to use interaction strategies.	–	100.0	100.0	–	87.5	100.0	–	100.0	87.5	–	100.0	100.0
Peers used at least 10 aided AAC models per 30 minutes.	–	(0.0)	88.9	–	(0.0)	57.1	–	(0.0)	87.5	–	(14.3)	85.7
Peer use of interaction strategies[b]												
Ask questions	0.0	2.0	1.9	0.4	1.5	1.9	0.6	2.0	2.0	0.1	2.0	2.0
Use expectant delay	0.0	2.0	1.9	0.0	1.3	1.7	0.0	1.6	1.9	0.0	1.9	2.0
Use encouraging language	0.0	1.6	1.4	0.1	1.4	1.3	0.3	1.3	1.9	0.0	1.7	1.7
Peer use of aided AAC modeling strategies[b]												
"Tell about me"	0.0	(0.0)	1.6	0.0	(0.1)	1.7	0.0	(0.0)	1.1	0.0	(1.0)	1.3
"Tell about/ask my friend"	0.0	(0.1)	1.6	0.0	(0.0)	0.9	0.0	(0.0)	1.3	0.0	(0.7)	1.9
"Respond to what my friend says"	0.0	(0.0)	0.4	0.0	(0.0)	0.4	0.0	(0.0)	0.4	0.0	(0.0)	0.6
Paraprofessional use of facilitation strategies[c]	<1	6.7	6.9	<1	4.1	4.7	<1	6.0	6.0	0	3.3	2.4

Note. BL = baseline phase; PN = peer network intervention phase; PN+M = peer network with aided AAC modeling intervention phase. The intervention checklist was used only during intervention phases. Numbers in parentheses ( ) indicate implementation was not intended during the respective intervention phase.

[a] Numbers reflect the percentage of sessions fidelity item was observed in the respective intervention phase

[b] Numbers reflect the average observed occurrence using the following scale: 0 = *not observed*, 1 = *sometimes observed* (i.e., < 5 instances), 2 = *frequently observed* (i.e., 5 or more instances)

[c] Numbers reflect number of different facilitation strategies observed (e.g., prompt interaction, praise interaction, find a role in a shared activity for the student or peers)

Table 3. *Social Validity Ratings from Peer Network Members and Facilitators*

Social validity items	Sara	Grace	Jeremy	Joanna	*M*
Peer network members					
At first, I was excited to become a peer network member.	5/5/5	5/5/5/3	5/5/5	5/4/5	4.8
I had enough help from an adult during the peer network.	5/5/4	5/5/5/4	4/5/4	5/5/5	4.7
I know how to interact with [student].	5/5/5	5/3/4/3	5/5/4	4/4/4	4.3
[Student] became better at communicating when I showed him/her words on the communication device.	5/5/5	5/5/4/3	5/4/5	5/4/4	4.5
I enjoyed learning to use the communication device when I talk to [student].	5/5/5	5/5/5/5	5/5/4	5/4/5	4.8
Other students in the school should also do this.	5/5/5	3/5/4/4	3/5/4	5/4/5	4.4
I would be a peer network member again in the future.	5/5/5	5/5/5/5	5/5/5	4/4/5	4.8
Our school should have more peer networks.	5/5/5	5/5/5/5	4/5/4	5/4/5	4.8
[Student] met new people and/or became better friends because of the network.	5/5/5	5/5/5/4	5/5/5	4/3/5	4.7
[Student] is my friend.	5/5/5	5/5/5/5	5/5/5	4/4/5	4.8
I would recommend being a peer network member to my other friends.	5/5/4	3/5/5/3	3/5/5	4/4/5	4.3
I had fun being a peer network member.	5/5/5	5/5/5/5	5/5/5	4/4/5	4.8
Peer network facilitators					
The amount of time required for planning and training was reasonable.	4	4	4	5	4.3
I would need ongoing consultation to continue implementing these strategies.	2	3	3	2	2.5
Having peers model the communication device helped the student use it more.	4	4	5	3	4.0
I could use what I learned to teach others to model the communication device.	4	4	4	4	4.0
I am motivated to continue using what I learned in this project.	3	2	4	4	3.3
The peer network intervention fits well within this school.	4	3	3	3	3.3
I would know what to do if asked to implement a peer network again.	4	4	4	4	4.0
[Student] has benefitted socially from the peer network intervention.	5	4	4	4	4.3
[Student] has more friends and/or got to know friends better.	4	3	3	3	3.3
[Student] became better at communicating through the intervention.	5	4	3	4	4.0
The peers without disabilities benefitted socially from being a peer partner.	5	4	4	4	4.3
Overall, I enjoyed participating in this project.	4	3	5	4	4.0

Note. Data reflect the peer or paraprofessional-facilitator's rating using a 5-point Likert-type scale: 1 = *strongly disagree*, 2 = *disagree*, 3 = *neutral*, 4 = *agree*, 5 = *strongly agree; M* = mean across participants

Supplemental Materials S1. Adherence Checklists for Pre-intervention Planning Meeting, Facilitator Training, and Peer Orientation

I. Fidelity Checklist for Team Planning meeting

Component 1: Introduction and Overview
- ☐ Coach provides templates of note-taking sheets for each component of the planning meeting
- ☐ Coach provides an overview of agenda for the planning meeting and facilitates introductions of team members
- ☐ Coach describes the procedures and steps of the intervention, providing a rationale for the overarching and specific goals of the intervention

Component 2: Identifying a Theme and Activities
- ☐ Coach facilitates a brainstorming session to identify an overarching theme/ activity to inform the planning of peer network meetings
  - ☐ Explains the purpose of the overarching theme/activity and that it should (a) inform the planning of the intervention, (b) be feasible, and (c) be motivating and fun for the student and a group of same age peers
  - ☐ Encourages each team member to share input about ideas
  - ☐ Guides the team in coming to a decision about one overarching theme/activity
- ☐ Coach facilitates the team to record (i.e., write down formally) activities and the materials needed for peer network meetings within this overarching idea

Component 3: Identify Target Vocabulary and Discuss Changes to Aided AAC
- ☐ Coach provides support for the team to identify and list target vocabulary
  - ☐ Explains requirements for selecting target vocabulary
  - ☐ Explains the importance of core vocabulary and provides examples
  - ☐ Explains the importance of activity-related vocabulary and provides examples
  - ☐ Facilitates the team in listing 5-10 activity-related and 5-10 core vocabulary words meeting the requirements
- ☐ Coach provides support for the team to discuss changes to vocabulary on the AAC device
  - ☐ Team identifies who is responsible for making the changes
  - ☐ Team talks about vocabulary and arrangement of vocabulary on the device

II. Fidelity Checklist for Facilitator Training

Component 1: Introduction and Rationale
- ☐ Intervention coach provides an overview of agenda for the training and gives the facilitator the printed manual
- ☐ Coach reviews the rationale and procedures for the peer network intervention
- ☐ Coach reviews the plan for peer network meeting
  - ☐ Reviews the overarching activity identified by the planning team, needed materials, and expectations for the facilitator to prepare for each network session
  - ☐ Reviews the vocabulary on the AAC device and ensures the programming changes have been made

Component 2: Explain Peer Recruitment
- ☐ Coach discusses strategies for recruiting peers, and indicates where these materials are found in the printed manual

Component 3: Prepare Facilitator to Lead Peer Orientation
- ☐ Coach explains the orientation meeting for peers
  - ☐ Describes the expectations for the facilitator during the peer orientation
  - ☐ Describes the role the intervention coach will play during the peer orientation
  - ☐ Carefully explains each of the steps, indicating where the materials are found in the coaching manual
  - ☐ Provides an opportunity for the facilitator practice talking through each of the steps, while providing prompting and encouragement
  - ☐ Provides opportunity for the facilitator to ask questions about the peer orientation

Component 4: Prepare Facilitator to Facilitate Interactions
- ☐ Coach explains and models social facilitation strategies to be used during network meetings, and indicates where these materials are found in the printed manual

Component 5: Answer Questions
- ☐ Coach offers time for discussion/ questions/ describing next steps

III. Fidelity Checklist for Peer Orientation

- ☐ Facilitator encourages all students to introduce themselves
- ☐ Facilitator shares a rationale for the peer network intervention
- ☐ Facilitator shares/ supports the focus student in sharing information about the AAC device
  - ☐ Demonstrates how the student uses the device to communicate
  - ☐ Describes and shows peers vocabulary, including target vocabulary
  - ☐ Gives peers opportunity to look at the device/symbols
  - ☐ Provides opportunity for peers to ask questions about the AAC device
- ☐ Facilitator explains the procedures of the peer network, including:
  - ☐ The overarching activity/theme
  - ☐ The expectations for peers and the student during the activities
  - ☐ When peers should ask for assistance
  - ☐ Confidentiality and respectful language
- ☐ Facilitator introduces, explains, and gives examples of the three interaction strategies
  - ☐ Shows peers the visual cue card for the three strategies
  - ☐ Names, explains, and gives examples for "Ask each other questions" (i.e., ask open-ended questions and modify questions as needed by providing choices)
  - ☐ Names, explains, and gives examples for "Slow down and give everyone a turn to talk" (i.e., balance communication turns, wait and look at another student to give them time to respond)
  - ☐ Names, explains, and gives examples for "Encourage one another" (i.e., offer praise and use positive language)
  - ☐ Provides opportunity for peers to ask questions about the interaction strategies
- ☐ Facilitator provides prompting, feedback, and reinforcement while students practice using the interaction strategies during a shared activity
- ☐ Facilitator offers time for discussion/ questions/ describing next steps