Teamwork in Developing Educational Goals and AAC Intervention: Case Study

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Abstract: This poster details educational (IEP) goals and team planning strategies for a child relying on intentional behaviors including: a) agreeing on fundamental goals for all team members, b) clarifying the connection between AAC plan and goals, c) writing educational plans that measure multiple types of progress towards meeting the goals.

Meet AD

- 8-year-old boy with congenital disabilities
- Not independently ambulatory and sits with support in adapted seating
- Has significant visual impairments, and primarily searches or explores his environment tactilely.
- Can reach and grasp items in his immediate environment and scoot a short distance on his back to reach an object
- Produces 3-5 consonant-vowel combinations and a variety of vowel sounds. While he uses some vocalizations in ways that his parents perceive as meaningful, most of his vocalizations are perceived to be vocal play and exploration of sounds.
- Communicates primarily by intentional behaviors.

Phase 1: AD's current educational communication system isn't working

- No team consensus on educational goals – perception of extreme team conflict
- Previous outside consultation had restricted all communication intervention to a strict behavioral program of reinforcing AD when he hit a tactile switch for a toy.
- This strategy was tried for one year, and the entire team was frustrated that AD did not seem to enjoy, learn from, or generalize skills from this intervention.
- Team members, particularly family, agreed that this behavioral intervention had not been effective in improving AD's communication.
- Some team members were particularly concerned that any new plans implemented should be equally measurable as the previous plan.
- Most of the team (and particularly AD's parents) wanted an intervention plan that provided more immediate impact on AD's current communication skills.

Phase 2: Understanding AD's current communication strategies (one day of consultation)

- Entire team observed AD at home and school, interacting with familiar and unfamiliar people
- Family and other team members described and demonstrated AD's preferences, typical routines, and strategies they used to respond to his signals
- A consultant demonstrated additional response strategies in structured play with AD, and asked family and other team members to comment on AD's responses
- AD used some two-tool signals, where he used his body to control an object or another person as communicative "tools" (see below), or used his behavior to clearly

anticipate a message (such as alldone). In some situations, AD showed three-tool signals to use his body to send a message to a particular person (e.g. behavior + message + person).

Examples of AD's Two- and Three-Tool Communication Signals

Two Tools

Behavior	Partner-Interpreted Meaning
Opens mouth when eating	Wants a bite
Holds adult's hand	Exploring his world, social contact
Sudden loud vocalization	Protest, ready to get upset
Scratches with finger on surfaces	Likes sounds, exploring surfaces

Three Tools

Behavior	Partner-Interpreted Meaning
Reaches toward person with outstretched arm	Initiating hug
Pulls adult hand with item toward himself	Really wants more of item
Calms face or body when hears verbal choice	Wants that choice
Pushes away or throws item on floor	Doesn't want item
Smiles when touches bath sponge	Anticipates and likes bath

Ambiguous Signals with Alternative Meanings

Behavior	Partner-Interpreted Meaning
Hits hands together in front of himself	Frustrated, self-stimulation, "more"
Chops right hand down sharply	Bored, alldone, reinforced as "go"

Phase 3: Communicating for agreement among team members (1 hr. each day)

• Team members recognized and responded to AD's communicative behaviors in similar ways. All members perceived that AD produced intentional behaviors to accomplish personal goals, with occasional communicative behaviors toward listeners.

• All members also shared the common goal of promoting AD's intentional and symbolic communication through AAC.

• We systematically addressed the following areas of confusion or difference:

- How can educational (IEP) goals be both measurable and meaningful?
- How can we incorporate switches, symbols and other technology meaningfully?
- How can we reduce AD's challenging behaviors without stifling communication?
- How can we "teach" strategies to AD who is not yet showing intentionality?
- How can we be both realistic and supportive across environments?

Overall Principles used for Team AAC Intervention:

• Usually working towards positive change in a few mutually agreeable areas is more effective than insisting on one "best" solution, and can lead to more consensus.

• The parents and clients are always right in expressing their wishes, and we need to adapt our advice to meet those needs.

• Even if every team member doesn't agree on a child's current skills, teams can usually agree on a few key skills to improve the child's independent expression.

• Pick your battles – you don't have to prove your point in every conflict, and some issues are impossible to prove objectively (e.g. how much a child really understands).

• Reaching a common team plan usually involves a) identifying the bottom line goal for team members, especially parents, and b) clarifying the connection between the plan and those goals, and c) writing plans that measure all types of progress towards the goals.

Phase 4: Developing an intervention plan based on AD's current communication and family goals (second consulting day)

Team Issues:

- Can AAC intervention address behaviors as legitimate forms of communication?
- Could symbols and voice output devices be part of AD's communication system without demonstrating that he "knows" these symbols before he is allowed to use them?
- How and how quickly can intentional behaviors support the development of more complex communicative behaviors?
- Can partner and environmental modifications serve as legitimate intervention goals for educational teams? If so, how can these be measured?

Team Responses in Intervention Plan:

- Gradually adding components or "tools" of the communication process to AD's existing behavioral strategies, including symbols and voice output as well and behavioral and intentional "tools" (e.g. addressing another person).
- Providing feedback to AD's spontaneous behaviors so that AD could perceive their effectiveness and have a communicative alternative to inappropriate behaviors.
- Developing a common inventory of recognizable signals and establishing lines of team communication for modifying this inventory as new signals occurred in contexts.
- Expanding his awareness and use of object symbols, including anticipating events, and not waiting for AD to demonstrate independence at understanding these symbols.
- Reinforcing AD's natural gestures as signs and shaping them into more recognizable symbolic forms as needed.

Writing the IEP goals:

- While team members agreed that communicative goals were equally applicable across settings, they needed different procedures for implementing goals across contexts.
- One school team member was particularly concerned that goals include specific measurable behaviors that AD would produce under probed conditions.
- Yet, team members agreed that modifying partner and environmental factors were essential components in AD's intervention, and that home and school needed to be able to adapt these factors independently.
- Consequently, AD's educational goals provided consistent measurement tasks that could be applied to a constantly changing set of communicative behaviors.
- All team members agreed that legitimate educational goals could include AD's performance as well as symbol exposure and environmental response goals as below.

AD's Educational (IEP) Goals and Measurement Strategies to Document Progress

Performance Goals

1. For at least one communicative purpose (such as rejecting, requesting, initiating social contact), AD will increase his spontaneous or cued use of appropriate communication signals with familiar partners.

Possible measurement strategies:

a) Collect periodic videotape samples of AD's interaction in various contexts and tally number and type of signals used appropriately during communication opportunities.

b) Collect incidental counts of different communication signals and their purpose at least once per day, alternating the context and time of recording each day.

2. (Incidental result of direct communication goals) AD will reduce or maintain infrequent production of inappropriate behaviors during schoolday transitions, such as changing locations or activity.

Possible measurement strategies:

Same as above, but counting target inappropriate behaviors at different transition times

Exposure Goals

1. AD will receive consistent daily experience at touching tactile object symbols to anticipate upcoming events, incorporating at least five symbols twice a week each into his daily routines.

Possible measurement strategies: Tally dates and/or number of symbol exposures on attached labels for each object symbol as it is used in AD's routines.

2. AD will receive consistent daily greetings from various classroom peers using greeting gestures recognizable to AD, with an average of two greetings/day.

Possible measurement strategies: Tally greetings by classmates daily within integrated classroom

Environmental Goals

1. Partners will provide feedback and responses specified in AD's communication plan when AD produces spontaneous signals outlined on the plan, with a goal of at least 70% adult response rate to AD's targeted communication signals.

Possible measurement strategies:

a) Team members will count the number of AD's signals and adult responses for another team member interacting with AD, with at least biweekly checks across different team members.

2. Additional informal records may be maintained during integrated class activities including: a) Interacting socially with peers, b) Tolerating transitions, with increased pause time before interacting in activity, c) Taking turns in simple concrete activities, d) Using communicative signals to indicate positive & negative reactions within activities

Phase 5: Modifying intervention plans for changing skills (2 follow-up consults, 1.5 hrs)

• Family and other educational team members implemented the IEP for one school year. AD improved spontaneous production of signals, response to object symbols, reduction in challenging behaviors, and responses to signals from both adults and peers.

• The family was pleased with AD's communication progress and all team members felt that the general emphasis of the plan was appropriate for AD's goals

• Team members considered the procedures feasible and generally appropriate for both home and school environments. However, AD's parents raised additional questions about the flexibility of the AAC plan, particularly during the summer, as they modified strategies in response to AD's changing skills and needs:

• Can the AAC intervention plan be equally appropriate for home, school, and community use?

• How can team members freely modify AD's intervention plan to suit his communicative needs within these contexts and still provide some consistency of communicative feedback to AD?

• *Team response*: Additional discussion identified reasons why the plan was perceived as being inflexible, including past experience with strict behavioral programs, and reduced team communication during the summer

• The plan was modified to include mechanisms for team communication so that all members felt free to adapt strategies freely and keep other members informed and skilled at responding to those changes.

• AD's strategies that differed across contexts were shared and recognized as contributing to overall communication goals

Phase 6: Planning for the future (one two-hour follow-up visit)

• AD's parents were primarily concerned with his ability to intentionally express communicative messages during initial planning meetings.

• AD began to increase his use of intentional communicative signals directed toward listeners. For instance, he would deliberately vocalize and reach out toward a listener for social interaction or requests, and anticipated the desired result.

• At this point, his parents and other team members were frustrated that AD did not use similar requesting behaviors when offered two object choices simultaneously.

• His parents were concerned that his current AAC intervention will show demonstrable progress toward a more complex communicative goal such as expressing choices from two symbolically represented items.

• Three types of current communication goals were identified as particularly useful in supporting the long-term goal of 2-symbol choices, and subskills involved in the ongoing development of those goals are described below. As with any skill for children relying on AAC, these subskills are not a strict hierarchy but gradually more complex skills that complement each other.

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Examples of Communication Progress Through Other Short-Term Goals
Long Term Goal: Choice Making with 2 Symbols

Spontaneous Requesting Behaviors	Preference Signaling and Choices	Expos (and Boar
Initiates signals about many kinds of distant objects	Distinguishes between preferred and nonpreferred choices	Distinguishes di different symbol
Initiates signals about distant objects/people	Anticipates two possible choices	Requests with c activities
Initiates signals about present objects; anticipates desired response	Anticipates sequential choices (one choice at a time)	Examines more symbol before c
Initiate signals spontaneously towards people	Make choices in anticipation (single choices)	Spontaneously picture or objec
Initiates signals spontaneously towards objects		*Responds mea distance from ol
Broadens cued or situational signals to more activities	Expand signals to more routines (single choice level)	*Responds mea symbol if attach
AD increases production of clearer signals in structured situations		Reaches for or request activity
We model conventional signals with cues in structured activities	Initiation of deliberate signals within familiar routines (e.g., “all done” in food situations)	Reaches for obj anticipate or rei
We structure activities and AD responds behaviorally and we react		Anticipates activ with object symb present
We respond to AD’s behaviors that we observe within activities	We model clearer preference signals for single <u>concrete</u> situations within immediate feedback	Indicates recogn symbols within a
		Tolerates objec anticipates pres
	Predictable spontaneous behaviors with adult feedback under certain routines (calm, push away, smile, laugh, reach)	Tolerates expos object symbols activity

*May be vision limited