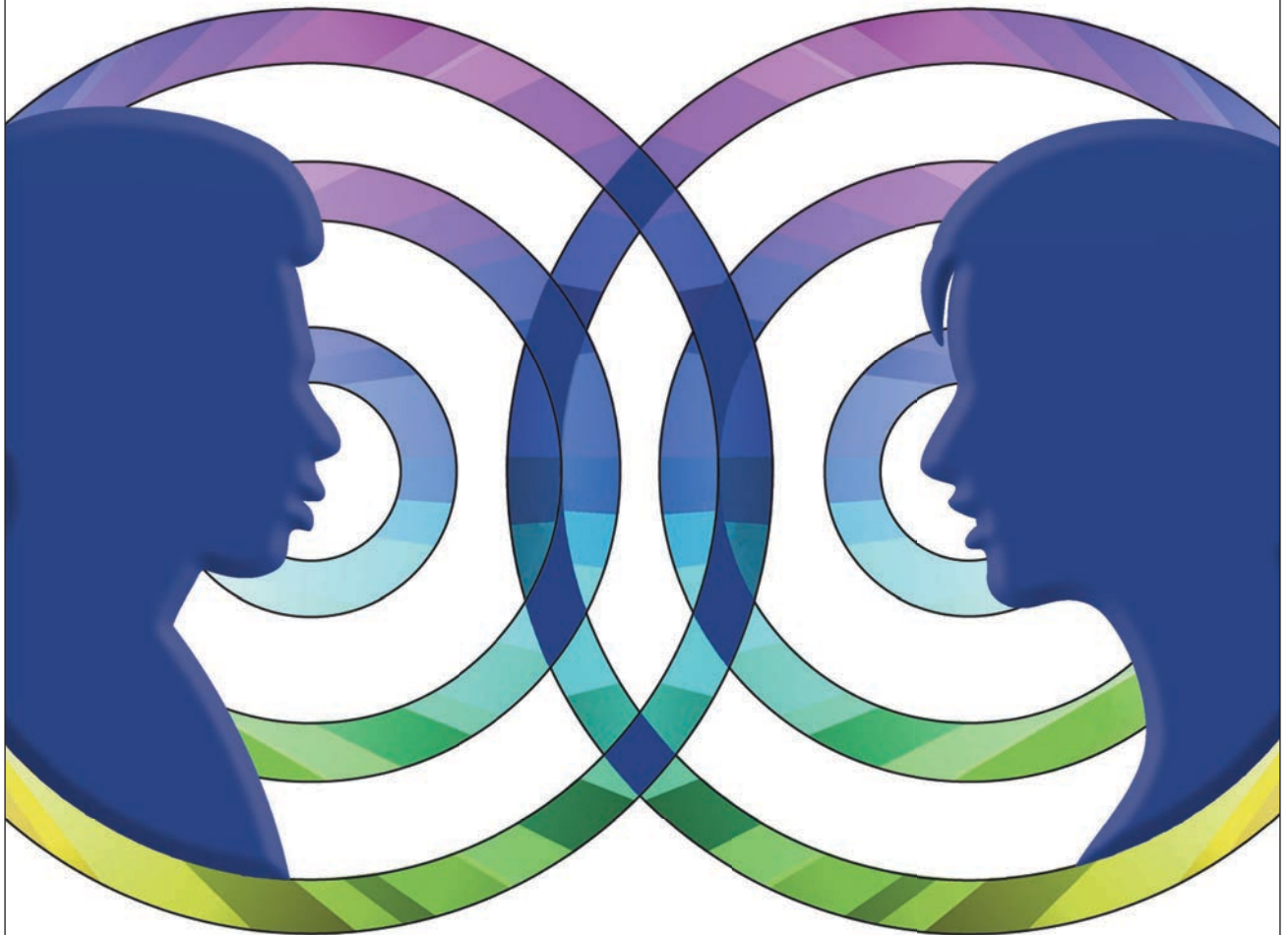


ATTAINMENT'S

Achieving
***Communication
Competence***

Three steps to effective intervention



YVONNE GILLETTE

Win/Mac CD

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Achieving Communication Competence Three Steps to Effective Intervention

Yvonne Gillette, PhD

Graphic design: Elizabeth Ragsdale

An Attainment Company Publication

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Printed in the United States of America

ISBN: 1-57861-812-6



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CONTENTS

About the Author	4
Acknowledgments	5
Introduction	6
Evidence-Based Support	8
STEP 1 Assess the Environment, Then Plan for Change	13
Chapter One: Setting, Opportunity, and Partners	15
STEP 2 Assess Communication, Then Plan for Change	23
Chapter Two: Communication Skills	25
Chapter Three: Selecting Messages and Designing Displays	39
Chapter Four: Selecting Partner Strategies	53
STEP 3 Implement the Plan, Report on Progress, Then Update	57
Chapter Five: The Plan: Implementing, Reporting on Progress, and Updating	59
Chapter Six: Ongoing Team Process: The Cycle of Environmental Intervention	65
Case Studies	73
References	101
Appendixes	105
A Quick Reference Guide	105
B Inventories and Planning Guides	109
C Intervention Guides: Communication Opportunities	121
D Intervention Guides: Communication Skills	177
E Intervention Guides: Partner Strategies	239



ABOUT THE AUTHOR



In *Achieving Communication Competence: Three Steps to Effective Intervention*, Yvonne Gillette shares her insights on systematic assessment and intervention for individuals with severe communication disabilities. This step-by-step approach provides teams with the tools they need to collaborate efficiently in designing and implementing interventions over time. Her aim in this publication is to positively impact lives by fostering effective communication between individuals with severe communication disabilities and their significant others.

As a professor at the University of Akron, Yvonne has built the AT/AAC Center, as a place where faculty, students, and members of the community can learn about technology for communication. The

Center functions on and off campus, always with the objective of building environmental communication skills individuals can use in daily life, often using technology. Yvonne conducts workshops, teaches classes, delivers presentations at conferences, supervises student clinicians, and writes in the areas of severe communication disabilities, augmentative communication, and assistive technology.

Her most recent published research with colleagues in the AT Collaborative investigated the effectiveness of personal data assistants (PDAs) and cell phones with PDA features. In Soto and Zangari's *Practically Speaking: Language, Literacy and Academic Development for Students with AAC Needs* (2009), she explored the integration of assistive technology with augmentative communication. She presents regularly at national conferences such as the American Speech and Hearing Association (ASHA) and the Assistive Technology Industry Association (ATIA). She is an ASHA Fellow. Yvonne is a licensed and certified speech-language pathologist and holds an MA and a PhD from The Ohio State University.



ACKNOWLEDGMENTS

The author wishes to thank the graduate students at the University of Akron who over the years implemented intervention programs following the principles in *Achieving Communication Competence: Three Steps to Effective Intervention*. From their comments and suggestions, this clinical intervention for severe communication disabilities took its current form. In particular, two graduate assistants, Tracy Clark and Monica Young, showed great dedication in editing the communication opportunity guides and creating drafts of the matching overlays. Their contribution to this part of the project was invaluable.

I am also forever grateful to the families, interventionists, and clients who worked hard to implement the changes in their communication efforts which the program recommends. Their stories form the basis of the vignettes and case studies presented in this book. Their struggles to communicate through speech-generating devices, speech, and/or other augmentative/alternative communication strategies inspired me.

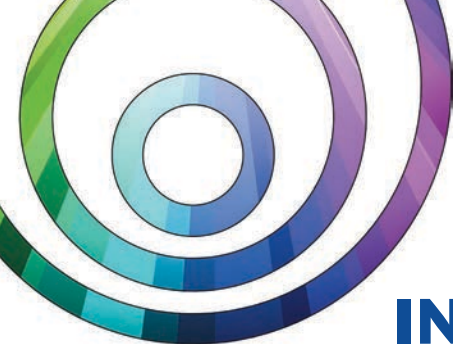
My goal was to make this publication as user-friendly as possible so that the program may

be implemented with the broad range of individuals who will benefit from the approach. I hope I achieve this goal.

Achieving Communication Competence is built on *Achieving Communication Independence*, published with Thinking Publications in 2003. Nancy McKinley, founder of Thinking Publications, provided the motivation I needed to begin, continue, and finish that project. Her colleague, Linda Schreiber, encouraged me to update the publication with the Attainment Company, and for that encouragement, I am grateful. She and Joni Nygard of the Attainment Company made it impossible for me to say no. Due to their encouragement, I think this current publication provides a much-needed update to the original version of the program. Elizabeth Ragsdale made it beautiful.

My husband, David Lathrop, supported my efforts throughout the project, as he always does. I am forever grateful for his support.

*Yvonne Gillette, PhD
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INTRODUCTION

If you are reading this book, you know one or more individuals who have severe communication disabilities. You may be a family member, teacher, speech-language pathologist, or anyone else with a vested interest in improving these communication skills. You may spend your time with this individual at home, at work, at school, or in the community. The individual's communication repertoire may include some speech, an augmentative communication device, gestures, and sounds in their multimodal communication set. Whatever the scenario, this individual has difficulty communicating with you and other communication partners, and you want things to be different.

What can you do? How can a device help? How can others help? Where to begin? All of these questions have answers within *Achieving Communication Competence: Three Steps to Effective Intervention*.

Goal of Achieving Communication Competence

Achieving Communication Competence uses a collaborative model of assessment and planning. The program addresses the following goals concurrently during a cycle of collaborative assessment and intervention:

1. Assess the individual's communication environments.
 - Inventory communication settings such as home, school, work, and community.
 - Inventory communication opportunities that occur or could occur in these environments.
 - Note the partners typically involved in each communication opportunity.
2. Assess the individual's communication skills.
 - Assess four communication aspects: interact, communicate, express, and receive.
 - Rate independence in 11 communication skills (participation, indication, social acceptability, emotional control, unaided communication, aided communication, vary message functions, intelligibility, attention, behavioral response, and contextual skills).
 - Summarize information from the inventories to describe the present level of functioning for intervention plans, including IFSPs, IEPs, IHPs, and other plans.
 - Measure progress longitudinally.
3. Make a plan to enhance the individual's environment for communication development by providing more planned opportunities to communicate with their natural partners.
 - Increase the number of communication settings and partners for the individual's successful communication.
 - Increase communication opportunities for the individual.
 - Increase the individual's use of messages with unaided and aided communication.
 - Increase the use of partner strategies that enhance the individual's communication skills.

- Follow regular intervention schedules, report on progress, and come together to update the plan periodically.
4. Collaborate to ensure that the two-way nature of communication is promoted in natural environments.
- Practice the plan with the individual and significant others to ensure intervention fidelity (Are team members doing what they intend to do?).
 - Include significant others as team members to develop and implement the intervention plan.
 - Monitor use of the plan and provide regular updates through team collaboration.

Target Population

Achieving Communication Competence can be effective with all individuals who have severe communication disabilities without regard for their age, the nature of their disability, or whether or not they use augmentative communication technology. Individuals can benefit if they currently find it a challenge to participate with others, to get their messages across effectively, to make themselves interesting to others, or to respond effectively to what others do or say.

The clinical guidance provided here is useful with individuals who use augmentative alternative communication, as well as those who use unaided communication such as speech, sign, or gestural forms of communication. Individuals from infancy to over 80 years old can benefit from the assessment and intervention approach *Achieving Communication Competence* recommends. Those diagnosed with intellectual disabilities, autism, Down syndrome, traumatic brain injury, aphasia, cerebral palsy, dementia, and other significant disabilities are appropriate candidates for this resource.

Target Intervention Team Members

Interventionists with varied backgrounds across varied settings have successfully used this program. Teams often include speech-language pathologists, intervention specialists, parents, caregivers, and others who may interact regularly with these individuals. Intervention can occur in homes, schools, nursing homes, early intervention programs, group homes, adult workshops, and the community. Any setting can qualify, as long as it includes individuals who have challenges with interaction and communication. This system is interprofessional, cross-categorical, and cross-setting, addressing all clients who share the commonality of a severe communication disability.

Using Achieving Communication Competence

The program merges characteristics of an individual's environment with the individual's current communication skills to create a plan for communication change. This change may arise from the environment, the individual, or both. In any case, the changes occur because of an intervention plan implemented successfully.

As you read, pay close attention to the Communication Intervention Plan to see the guidance provided to change the individual's ability to communicate across people and environments. The plan is the centerpiece for the intervention—all inventories and procedures outlined here contribute to creating and implementing the plan. The plan supports collaboration among partners, guiding each step, gathering ideas from the intervention team using the program's assessment tools and guides, and condensing the ideas into a Communication Intervention Plan that will evolve over time through use, practice, and revision.



EVIDENCE-BASED SUPPORT

Achieving Communication Competence sets out a clinical program that intervention teams can follow to implement communication assessment and intervention with individuals who have severe disabilities. The program is supported by clinical expertise and research, and considers the cultural values of the client and intervention team. The program integrates factors that describe interaction patterns as well as message sending and receiving within contexts that include partners. Inventories assist teams in identifying and measuring factors related to the individual's communication, such as communication skills, communication opportunities, and partner strategies. Intervention plans negotiated with partners allow interventionists to coach these partners toward developing communication partnerships with individuals who have significant communication disabilities. The program assists teams in developing communication partnerships through partner education, collaborative planning, consistent intervention, and modification of plans based on regular intervention results. Sources of support include documents developed by teams of clinical experts as well as research reports.

Clinical Expertise

Clinical expertise supporting factors associated with *Achieving Communication Competence* is presented in documents from the American Speech and Hearing Association (ASHA) and the Quality Indicator for Assistive Technology (QIAT) Consortium. ASHA is an organization that certifies speech-language

pathologists and provides guidelines for clinical practice in the delivery of speech-language services. ASHA specifically address issues related to augmentative alternative communication assessment and implementation in documents including *Preferred Practice Patterns for the Profession of Speech-Language Pathology* (2004), *Augmentative and Alternative Communication: Knowledge and Skills for Service Delivery* (2002), and *Knowledge and Skills Needed by Speech-Language Pathologists Serving Persons with Mental Retardation/Developmental Disabilities* (2005). All three documents have been developed through a collaborative review of recent literature by a panel of experts and are available at www.asha.org.

The QIAT Consortium is a grassroots group of assistive technology experts from varied professions and perspectives that has developed specific quality indicators for assistive technology services in school settings. Their document, *Quality Indicators for Assistive Technology Services* (Revised, 2005), supports the model of assessment and intervention presented in *Achieving Communication Competence*. (In particular, see quality indicator #2, *Quality Indicators for the Assessment of Technology Needs*, and quality indicator #4, *Quality Indicators for the Implementation of Assistive Technology*). This document is available from http://natri.uky.edu/assoc_projects/qiat/index.html.

All of these documents indicate that communication skills should be assessed and interventions provided in the natural environment, in typically occurring daily communication opportunities, and should include collaboration with partners as well as

partner education and training. For example, ASHA-preferred practice recommendations indicate that speech-language pathologists (SLPs) may provide services individually or as members of collaborative teams. These teams include the individual, family/caregivers, and other relevant persons. The design of the intervention must affect the interactions between the individual and his partners in natural environments, and help the individual as well as her communication partners to understand, use, maintain, and update AAC and other assistive technologies.

ASHA has also identified a primary role for SLPs in AAC assessment and intervention by recommending that their assessments and intervention include not only the individual with the need for AAC intervention, but also an assessment of, and intervention with, the primary communication partners and environments.

QIAT recommends a similar approach in conducting assessments and intervention, indicating that there should be a functional assessment in the student's customary environments, including classroom and other school locations, home, community, or workplace, and that in these environments, data should be collected about the student, environment, and tasks.

When considering implementation of the assistive technology plan, assistive technology should be integrated into the curriculum and daily activities of the student across environments. Specific research data also supports these principles of partner involvement in intervention as well as environmentally based assessment and intervention.

Research and Theoretical Support

Before a clinical model is adopted by an interventionist, today's healthcare and education worlds require research evidence as well as clinical expertise to support assessment and intervention models. When choosing a model for clinical practice, necessary questions include:

- What essential assessment points need to be measured to set goals for an intervention plan and measure progress on the goals?

- Do the goals and strategies in the intervention plan make a difference in the individual's performance?
- What evidence supports the proposed intervention suggested by this assessment?

To answer these questions, researchers strive to test the effectiveness of their models and publish the results to guide clinicians. Scholars gather collateral evidence to support the clinical directions their models of practice recommend.

Guidelines of ethical practice compel interventionists to seek models that integrate the best research evidence with clinical expertise and patient values (Sackett, Straus, Richardson, Rosenberg & Haynes, 2000).

The principles of *Achieving Communication Competence* include (1) assessing measures of the individual's environments, opportunities, and partners as well as their communication, and (2) intervening with the individual and partners to develop improved communication through partner communication strategies, natural contexts for intervention, and respect for the cultural values and varied perspectives of the individual and his intervention team.

Measures of Assessment and Intervention Designs

Designing an effective communication intervention plan requires assessing essential ecological factors as well as communication skills. The program is designed to assist clinicians as they create environmentally sound intervention plans supported by best-practice principles (Calculator & Black, 2009) and multiple intervention models such as the Participation Model (Beukelman & Mirenda, 2005), Social Networks (Blackstone, 2003), and Beyond Access (Sonnemeier, 2005). These principles and models recommend an assessment of the communication world of the individual to include environments, opportunities, and partners as primary components of an individual's communication system.

Beyond the world of the communication exchange, interventionists must assess the communication

skills the individual uses. The program recommends considering participation skills such as turn-taking, along with more traditional measures of language and communication, such as modes or functions of communication.

Numerous research designs have included measures of turn-taking as well as balance among communication modes and complexity used in naturally occurring interactions. Commonly measured communicative behaviors include pointing, body movement, sounds, verbalizations, augmentative communication. Commonly measured expressive functions include offering greetings and farewells, rejecting, requesting, providing information, confirming/denying, and commenting. Studies based on these designs have established the utility of measuring these communication skills to describe the status and progress of individuals with severe communication disabilities (e.g., Binger et al., 2010; Kent-Walsh et al. 2010; Drager, 2006; Beck et al., 2009; Binger & Light, 2007; Lund & Light, 2006, 2007(a), 2007(b)).

These skills have also been frequently cited in scholarly articles as skills that are essential to communication for individuals who use AAC (e.g., Downing, 2005; Blackstone, 2003). The measures of interaction, communication modes, and expressive and receptive functions of communication derived from this supportive body of work are assessed and targeted as goals of intervention in *Achieving Communication Competence*.

Partner Involvement

Several studies that examined the effectiveness of AAC interventions were designed to include partners by providing them with knowledge of specific communication strategies and skill in using these strategies. Modeling, waiting, and turn-taking were the primary strategies partners developed as part of the intervention. Partner involvement is crucial to delivering effective AAC services because only partners can facilitate interaction in the natural environment. Partners include anyone

who regularly communicates with the individual, such as family members, interventionists, teachers, peers, and coworkers.

Partner Strategies

The specific communication strategies employed in *Achieving Communication Competence* are key components of several AAC intervention strategies that have been tested in research models. These include aided language stimulation (e.g., Elder & Goossens', 1994; Goossens', Crain, & Elder, 1992; Harris & Reichle, 2004; Bruno & Trembath, 2006; Dada & Elant, 2009); System for Augmenting Language (SAL) (Romski & Sevcik, 1996); natural aided language (Cafiero, 2001); aided language modeling (Drager, Postal, Carrolus, Castellano, Gagliano, & Glynn, 2006); and aided AAC modeling (Binger & Light, 2007; Binger, et al., 2008; Kent-Walsh et al., 2010).

Although these programs may differ in some ways, all include partner education to employ specific strategies in natural contexts. For example, Binger and Light (2007) employed aided AAC modeling by using either nonelectronic or voice output systems to augment speech input.

The devices partners used provided models of the kinds of multiword messages that they posited preschool-aged children would produce in common play scenarios. Further, the models they provided mirrored closely the types of messages that were goals for the children. When they communicated in ways the child was expected to communicate, they provided a closely matched or fine-tuned model for the child.

An additional strategy, expectant delay, provided additional wait time, which allowed the child additional time to organize and produce the messages. Another source of delay was provided by modeling a message on the voice output system, which slows down the rate of communication.

Partners employing aided AAC modeling as described in Binger and Light employed commenting on ongoing play scenarios using the communication device and verbal speech. Each play scenario was accompanied by a communication

device programmed to include single words, either AGENTS, ACTION, or OBJECTS. Partners provided communication models in comment form, either AGENT + ACTION, ACTION + OBJECT, or AGENT + OBJECT. The Binger and Light study indicated the effectiveness of aided AAC modeling incorporating these strategies for four of the five participants. Five primary strategies recommended in *Achieving Communication Competence*—modeling, matching, waiting, commenting, and responding—are supported by this and related studies.

Augmented Input

In a study published in 2010, interventionists provided one to three parent-coached interventions to 68 families whose children spoke fewer than 10 words: (1) augmented communication output, (2) augmented communication input, and (3) spoken communication. Primary strategies of each intervention included modeling messages for the child with the speech-generating device in augmented input, hand-over-hand prompts to use the device in augmented output, and using speech sounds in spoken communication. The children whose parents were coached in augmented input produced the most spoken words at the end of the 24-session intervention period. Apparently, augmenting input provided a picture-based translation of the spoken message, which may have clarified the input for these children. Augmenting the input, a strategy promoted throughout *Achieving Communication Competence*, is supported by this research (Ronski, et al., 2010).

Service Delivery Involving Partners

To systematize partner involvement, *Achieving Communication Competence* provides a protocol called the Cycle of Environmental Communication Intervention (p. 66, Figure 28). This protocol incorporates principles from the eight suggested stages of partner instruction designed to teach partners to employ aided AAC modeling (Kent-Walsh & McNaughton, 2005).

These authors reviewed the literature on partner training and found indications that successful change in the partner's communication style, such as employing turn-taking, can have a positive

impact on the individual's communication skills. Partners who employed the use of these strategies had positive impact on the communication of the children being taught AAC. These partners included researchers, educational assistants, and parents (Binger, Kent-Walsh, Berens, Del Campo & Rivera, 2008; Binger & Light, 2007; Kent-Walsh, Binger, & Hasham, 2010). While these researchers primarily addressed young children, similar positive results with adults who had developmental disabilities have also been reported (e.g., Beck, Stoner, & Dennis, 2009).

Natural Contexts for Intervention

Studies that address partner issues also support intervention in the natural environment, generally concluding that effective instruction occurs in the daily contexts of the individuals, such as home or school. The Environmental Communication Inventory examines the individual's communication environments, opportunities, and partners.

Light and Binger (2007) showed successful use of common play scenarios to foster communication. Play scenarios provided the opportunities for communication, and the vocabulary items selected included a range of agents, actions, and objects. This method of message selection is reflected in the Message Selection Guide: Words (in this book).

When context, rather than parts of speech, provides the basis for vocabulary selection and message production, a range of vocabulary items across parts of speech can easily be suggested, since the context there will require talking about doing things (actions) with others (agents) using things in that environment (objects). All of the studies cited to support partner involvement also employed the use of naturally occurring daily contexts, such as play, book reading, eating snacks with children, and music discussions with adults.

Collaboration to Foster Respect for Cultural Values and Varied Perspectives

AAC interventions require collaboration between family members and interventionists—in fact, among all who regularly interact with the individual using AAC. These individuals often come to the

table with differing perspectives about the use of AAC and the degree to which a system should be employed in regular daily interactions. Intervention teams must collaborate to develop a sound Communication Intervention Plan (p. 110). Teams may be more productive with a clear and relevant intervention plan in place. Practitioners should be aware that not only do legal requirements exist for collaborative planning and family involvement, research and theoretical support also support this approach for designing and delivering effective services in AAC.

Legal requirements for collaborative planning and family involvement are established in the series of laws grouped together as IDEA (Individuals with Disabilities Education Act of 1990 - P.L. 101-476; IDEA Amendments of 1997 - P.L. 105-17, Individuals with Disabilities Improvement Act of 2004 - P.L. 104-446). In addition to collaboration, these laws also provide for specific services related to AAC, such as evaluation, providing for device acquisition, coordinating with other interventions, training, and technical assistance.

Research and theory also support family involvement in a collaborative team as essential to successful implementation of AAC in school and home settings. Robinson and Solomon-Rice (2009) have created an excellent summary of the issues and related research and theoretical

sources in their chapter “Supporting Collaborative Teams and Families in AAC,” in *Practically Speaking: AAC in the Schools*. The issues include sensitivity to family values, cultural competence, family readiness, professional support, and training opportunities.



Summary

Clinical expertise, theory, and research exist to support the principles presented in *Achieving Communication Competence*.

These principles include:

- Assessing and intervening for communication in natural contexts and with partners who are typical interaction partners
- Developing communication through partner interaction modeling
- Service delivery involving partners
- Sensitivity to the varying cultural values that may be present on the team.

The inventories, guides, and intervention plan are all designed to promote these principles throughout the assessment and intervention process. Intervention teams employing these principles should find that using this program facilitates their goal of enhancing communication for the individuals they serve.



STEP 1

Assess the Environment, Then Plan for Change

Assessment and Intervention Process	Process Tools from <i>Achieving Communication Competence</i>
First, assess the individual’s environments, partners, and opportunities.	Environmental Communication Inventory (Appendix B)
Then, select and record environments, partners, and opportunities for intervention.	Communication Intervention Plan (Appendix B)
Select Intervention Guides provide educational resources for team about the opportunities.	Intervention Guides: Communication Opportunities (Appendix C)

Outcomes	Guidance
Environment Outcomes	<ul style="list-style-type: none"> • Start small and build.
Opportunity Outcomes	<ul style="list-style-type: none"> • Begin with three familiar opportunities. • Later add more opportunities. • Always choose social AND functional opportunities. • Involve significant others in identifying opportunities. • Identify what, where, how often, and with whom.
Partner Outcomes	<ul style="list-style-type: none"> • Begin with one partner, clinician, or significant other. • Next, promote interaction with others.



CHAPTER ONE

Assessing Environments and Planning for Change: Environment, Opportunities, Partners

Communication skills grow between partners in everyday opportunities. Many individuals with severe disabilities spend time alone or don't participate in interactions with others around them. This lack of participation limits their opportunities to learn and practice communication skills. Clearly, plans for changing communication skills must occur in the individual's environment.

Consequently, Step 1 of this process first involves the team working together to take a snapshot of the individual's complete communication environment—settings, opportunities, partners—then strategizing to identify ways the environment can support communicative change. Figure 1 details the process and tools involved in the assessment and planning process.

First, gather environmental information you need about the individual's communication setting, opportunities, and partners. The Environmental Communication Inventory assists teams as they take an inventory of the settings, opportunities, and partners in the individual's environment.

Then, complete the environmental portion of the Communication Intervention Plan with team members, including the individual when possible. Strategize to select specific communication environments, opportunities, and partners that the plan will target to begin to expand communication opportunities and skills for these individuals.

First Assess Environments, Opportunities, and Partners

Members of intervention teams may collect information to complete the inventory using a variety of formats, depending on the availability of informants and the familiarity of the member(s) with the individual. Use one or a combination of the following formats to gather information for the Environmental Communication Inventory:

- Interview one or more informants
- Interview the individual
- Observe the individual

FIGURE 1 Step 1: Select environmental factors—process and tools

Process	Tool
First, assess environments, opportunities, and partners.	Environmental Opportunity Inventory
Then, select environments, opportunities, and partners for intervention.	Communication Intervention Plan—environmental section

- Make preliminary ratings for each opportunity
- Double check with someone who may know more about the individual

When members of the intervention team are not familiar with an individual, interviewing someone with that knowledge can provide a good starting point for planning. The interview also provides an opportunity to establish a relationship with this person who is important in the individual's communication environment, and who may become an important participant in creating and implementing the Communication Intervention Plan.

Adapting the Items

Since the goal of the inventory is to obtain a customized profile of an individual's communication environment, the administration is not standardized. You may adapt items to make them more specific to the individual, and add details to make them more descriptive of the actual opportunity. For example, the item "Attending a concert" may be changed to "Attending a school assembly," or the item "Going bowling" might be expanded to include communicating with the lane attendant, team members, and a personal aide. Ask about the individual's daily activities to find examples of other opportunities that may be added to the list in the blank spaces provided.

It is not necessary to ask about every item on the inventory. Skip items that obviously do not apply, such as "Going bowling" for someone who has no access to this sport. However, it can trigger you to ask about participating in or watching other sports—often good alternative opportunities for communication. Be conscious of any opportunities to adapt such items, or ask them as open-ended questions like, "Does the individual ever go out for a special activity like attending a football game, movie, or some other recreational activity?" Follow up as needed to find out about partners who are available for interaction during the activity, and how frequently the individual communicates.

Rating the Items

The rating scale is described at the top of the Environmental Communication Inventory, as shown in Figure 2. Specify how often the opportunity for interaction is available using this scale:

- F Frequent (1 or more times per week)
- O Occasional (biweekly, monthly)
- P Potential (not used yet but could become occasional or frequent)

Also, in the blanks provided, list one or more persons who are present for each opportunity rated as frequent, occasional, or potential. These are persons who currently are or could become a communication partner with the individual.

Leave an item blank when a listed opportunity is not available for the individual. If a person completes an activity independently without others present, it is not a communication opportunity and should be left blank. You may list an opportunity as potential if it could occur with a partner present, but it doesn't happen that way now. In this case, identify the potential partner related to this opportunity.

No further scoring is involved with the Environmental Communication Inventory. The descriptive information collected here may be used for making decisions about settings, opportunities, and partners to target during intervention. Use this data to guide the team discussion for completing the environmental section of the Communication Intervention Plan.



Then Select Environments, Opportunities, and Partners for Intervention

The first three outcomes on the Communication Intervention Plan consider the environmental aspects of the individual's communication profile: environments, opportunities, and partners as illustrated in Figure 3.

FIGURE 2 Sample Environmental Communication Inventory

Rate only if a partner is available. List partner in space after each item rated. Partners can be peers, teachers, family members, friends, housemates, classmates, supervisors, care providers, etc. Rate each opportunity as:

- F Frequent (1 or more times per week)
- O Occasional (biweekly or monthly)
- P Potential (could become occasional or frequent)

Name Manny

Date 9/23

HOME

- F O P Having breakfast mother
- F O P Having lunch mother/caregiver
- F O P Having dinner caregiver-Ellie
- F O P Selecting a DVD _____
- F O P Watching a DVD _____
- F O P Doing laundry caregiver-Ellie
- F O P Loading the dishwasher caregiver-Ellie
- F O P Making a bed caregiver-Ellie
- F O P Taking care of animals _____
- F O P Cleaning a room caregiver-Ellie
- F O P Watching TV mother/caregiver
- F O P Getting the mail _____
- F O P Grooming _____
- F O P Putting away silverware caregiver-Ellie
- F O P _____
- F O P _____
- F O P _____
- F O P _____
- F O P _____

WORK/SCHOOL

- F O P Job interview supervisor
- F O P My plan: transition mother
- F O P My plan: updates mother
- F O P Arriving: school/work peers/supervisor
- F O P Leaving: school/work peers/supervisor
- F O P Writing on a chalkboard _____
- F O P Looking at books (computer) _____
- F O P Looking at books _____
- F O P Taking a break peers
- F O P _____
- F O P _____

COMMUNITY

- F O P Eating at a restaurant mother
- F O P Attending a worship service mother
- F O P Riding bus/transportation peers
- F O P Shopping at a grocery store caregiver-Ellie
- F O P Shopping at any store _____
- F O P Going to the library _____
- F O P Banking ATM/teller _____
- F O P Mailing at the post office _____
- F O P Going to a medical appt. mother/caregiver
- F O P Walking in the park _____
- F O P Going bowling peers
- F O P Taking a drive _____
- F O P Going to a movie peers/caregiver
- F O P Attending a sporting event _____
- F O P Going to a concert _____
- F O P Ordering fast food caregiver
- F O P Attending therapy mother/caregiver
- F O P Going for a haircut mother/caregiver
- F O P Having a manicure _____

PLAY/LEISURE/OUTSIDE

- F O P Playing baseball _____
- F O P Feeding the birds _____
- F O P Playing with a smartphone _____
- F O P Playing with numbers peers/supervisor
- F O P Playing at matching _____
- F O P Trading objects back and forth peers
- F O P Planting seeds _____
- F O P Having snacks peers
- F O P Feeding the birds _____
- F O P Making cards _____
- F O P Taking pictures caregiver-Ellie

FIGURE 3 Sample of the environmental plan section of the Communication Intervention Plan

	Environmental Plan Considerations	Environmental Plan
Environmental Outcomes	First Outcome: Choose one or two environments most likely to be available—home, community, work/school, play/leisure/outside.	<i>Work</i>
Opportunity Outcomes	First Outcome: Choose existing and somewhat successful opportunities—functional, social. Later Outcomes: Add less familiar opportunities to functional and social repertoire.	<i>Morning greeting</i> <i>Taking a break with peers</i> <i>Requesting help or information at work stations</i>
Partner Outcome	First Outcome: Choose one or two most likely to participate in an activity. Later Outcomes: Identify others who want to develop the partnership	<i>Supervisor</i> <i>Two peers in work group</i>

Information collected from the individual and significant others completes the Environmental Communication Inventory. The intervention team reviews the information together to select initial targets for the Communication Intervention Plan, including the environment(s), three communication opportunities, and the partner(s) selected to establish more effective communication with the individual. Updated plans may include more or different targets in these three areas, depending on the outcome of the previous plan. Review the information in the following sections to write outcomes for environments, opportunities, and partners—the environmental part of the plan as illustrated in Figure 3.

The Environmental Communication Inventory: What It Does

The Environmental Communication Inventory creates a snapshot of communication opportunities across settings and partners. Reviewing a completed inventory answers the clinical questions, “Where does this individual spend time, and what happens between him and others in those environments?” With this information at hand, intervention teams can begin to plan interventions to

enhance communication during these interactive opportunities.

Intervention teams survey opportunities across the environments of home, community, and work/school, and generic opportunities for play/leisure/outside in all three environments. Results indicate where the individual communicates, which opportunities are available for communication in these environments (e.g., home/mealtime, home/playing checkers, community/buying groceries), and with whom the individual communicates during these typical opportunities (e.g., mother, teacher, friend). This snapshot of communication provides the information required to place interventions in targeted environments, during specific opportunities, and with identified partners.

A completed Environmental Communication Inventory makes it possible for teams to pinpoint where the intervention will take place, during which everyday opportunities, and with which partners. These three factors are the first three communication outcomes in the Communication Intervention Plan: environment, opportunities, and partners. Baseline inventories as well as updates to the Environmental Communication Inventory make it possible for intervention teams to make periodic measures of progress.

These progress measures are completed on targets such as: communication in more environments, within more opportunities across these environments, and with more and varied partners. When the intervention team measures progress, they can use the updated information to begin to create new intervention plans, and to share information about the individual's communication performance with interested others. See Figure 2 to review a sample completed Environmental Communication Inventory.

Reviewing the Environmental Communication Inventory

The one-page inventory consists of a list of more than 50 commonly occurring daily life activities that could be communication opportunities on an intervention plan. These activities are categorized by setting: home, community, work/school, and generic opportunities for play/leisure/outside in any environment. A frequency rating is recorded for each opportunity that exists in the individual's life which is a possible opportunity for communication. Opportunities that do not take place in the individual's life are left blank. Each opportunity is followed by a space for listing one or more communication partners who are present when the individual takes part in the opportunity.

Items on the inventory are a representative sample of typical everyday communication opportunities. They are not intended to represent the most desirable or necessary interactions for any individual. Blank spaces are available at the end of each section (home, community, work/school, play/leisure/outside) so opportunities specific to the individual may be added as needed.

Understanding the Environmental Communication Inventory

The Environmental Communication Inventory is most relevant for children and adults with severe communication deficits, or young children experiencing difficulty with expressive language use. It may be used as often as needed to provide information for planning intervention. Information provided by the inventory may be used to measure

and report present levels of participation at any point during the intervention process.

The Environmental Communication Inventory provides three ratings for communication opportunities: frequent, occasional, or potential. The inventory divides the 50+ opportunities into four environments: home, community, work/school, play/leisure/outside. The listed opportunities prompt the team to consider a broad range of communication opportunities that may be present in the individual's life. Opportunity descriptions may be modified as needed to be more specific to the individual. Additional opportunities may be recorded in the extra spaces at the end of each section.

The team rates only items that apply to the individual's life circumstances. For each rated opportunity, a note is made of the partner(s) available in that opportunity. This information helps identify persons who may be incorporated into the intervention plan.

Use information collected through the Environmental Communication Inventory to develop the Communication Intervention Plan. The completed inventory may also be used to:

- Provide a comprehensive profile of the individual's current communication opportunities across settings
- Assist communication partners to understand their role in an individual's communication environment
- Indicate communication opportunities that could exist or increase in frequency if targeted for intervention
- Select contextual targets (environments, opportunities, partners) for intervention plans
- Measure change in the variety of communication environments and the frequency and variety in communication opportunities and partners

Selecting Outcomes: Environment

The individual will typically begin intervention in one environment, then expand to others. Environments considered by the Environmental Communication Inventory include home,

community, work/school, play/leisure/outside. Individuals with severe communication disabilities often experience limited environments and do not readily transfer performance from one environment to another. The Communication Intervention Plan begins by strengthening communication performance in one environment. After initial success, teams make decisions about when to expand communication skills to additional environments, opportunities, and/or partners.

Identify an environment where the individual already experiences some success. Look for environments that will have a significant impact on the individual's daily functioning. This may be identified as a work/school environment—typically broadly described places where an individual spends time. In some cases, the home environment is an initial target, particularly if family members are the most familiar and frequent partners of the individual with an existing record of successful interaction. In other cases, professionals and staff may first develop communication opportunities with the individual, then expand communication skills to the family or group home, for example.

Using the Environmental Communication Inventory to Select an Initial Environment

Use information from the Environmental Communication Inventory to select an initial environment for the intervention. Use a setting that shows opportunities for communication in both the “frequent” and “occasional” categories. For example, if home has frequent opportunities that show some success, use that as the first environment to address in the plan. If school

Samples of Environmental Outcomes

- Katie will participate in communication opportunities at school frequently (1–7 times a day).
- Jim will participate during work-related communication opportunities that occasionally occur in work environments (1–7 times a day).

closely follows home in terms of frequency and success, though, early collaboration between home and school might be possible. The intervention team may choose to target home as the primary environment and school as a secondary environment. Decide with the individual's team how the timing including both environments might work best. When working in multiple environments, target communication opportunities available or possible in each specific environment. Start small, then build a web of communication opportunities across the individual's network of environments.

Selecting Outcomes: Opportunities

Communication typically requires a topic. Individuals communicate while checking out books at the library, washing dishes with family members, interviewing for a job, arriving at school, or playing cards during a work break. All of these and more can be opportunities for conversation. In some cases, these communication opportunities can be enhanced by identifying them in the targeted environment, then planning for more frequent occurrences, longer participation periods, or more sophisticated message sending, as made possible by providing a communication display relevant to this situation.

Using the Environmental Communication Inventory to Select Opportunity Outcomes

Begin by identifying communication opportunities that are necessary and familiar, and where the individual is known to have experienced some success and/or motivation. These should be marked as “frequent” or perhaps “occasional” on the Environmental Opportunity Inventory. Later, identify existing opportunities where the individual may be present as an observer or bystander and begin to explore ways to become a more active participant. More challenging opportunities currently rated as potential opportunities can be selected later when the individual has established improved communication in more regularly occurring opportunities. Potential opportunities would need to be embedded in the person's life to make them a targeted opportunity.

Collaborate with those who know the individual best. A partner or potential partner in the targeted environment is likely to be the best informant to help identify existing and potential opportunities. They may know that some opportunities may be greater challenges because they require continuous attention to detail, or that conversation is not allowed during certain classroom times or on the workshop floor, so activities that occur in the workshop may not be the best opportunities to target initially. The intervention team may use their expertise regarding the individual's preferences to identify which of the existing opportunities may be the most successful target from among those that currently exist or could exist. They can often supply useful personal information, such as "buying an ice cream cone is not an important opportunity since the individual cannot eat ice cream."

Achieving Communication Competence suggests choosing three opportunities for an intervention plan. For example, at a sheltered workshop, the intervention team may identify opportunities during break time, buying lunch, or arrival/departure. These specific opportunities will be the opportunity outcomes on the Communication Intervention Plan. The intervention team should keep in mind that some opportunities may have a functional purpose, such as buying lunch, while break time may be more social. While functional outcomes are important, they often include time pressures. For example, it is difficult to practice using a communication device to send messages when individuals in line are hungry and want the

individual to keep moving. A balanced plan for this individual may involve just one functional opportunity and two social opportunities. This functional opportunity should be chosen carefully so that communication intervention is possible and does not interfere with others. For example, the lunch line example could be engineered so that the individual buys his lunch last until effective communication is established during this lunch-buying opportunity. As his communication skills grow, more functional opportunities may round out the plan. Social opportunities typically do not have such pressing issues, so planning may be less involved.

Selecting Outcomes: Partner

Many individuals with severe communication disabilities have few communication partners. Since this is so frequently the case, an outcome of the Communication Intervention Plan is to expand the number of the individual's communication partners. Another common issue is the limited time that an individual may spend with partners. Consequently, another possible outcome is to increase the length of time spent with communication partners.

Choose one, possibly more, partners to participate with the individual in each environment chosen in the Communication Intervention Plan. Initially, choose partners most likely to practice communicating with the individual. The goal is to target naturally occurring partners, then expand their numbers and/or the length of time spent communicating with partners. The intervention team may choose one skillful member to be the initial partner since initial clinical success can help recruit other partners. This initial interaction can also assist the team to better understand the individual's communication and behavior, which will facilitate the exchange of information among team members.

During planning, the team can help communication partners understand how their successful interaction and communication with the individual leads to progress in the individual's interaction and communication skills. Use your knowledge of the individual's partners to choose the person most

Sample Opportunity Outcomes

- Katie will participate at school during arrival/departure (each 5 times a week) and during art class (2 times a week).
- Jim will participate during communication opportunities that occur in community settings: buying a lottery ticket (once a week), riding the bus to work (5 times a week), and taking a walk with a friend (3 times a week).

likely to succeed in the initial plans, then eventually recruit the more reluctant partners. Start small and build a network of communication partners for the individual.

Using the Environmental Communication Inventory to Select Partners

Use the Environmental Communication Inventory to identify persons present during opportunities. Names of available partners are listed after each opportunity on the form. A partner who appears frequently may or may not be the best choice for an initial target. Talk with potential partners to determine their interest and motivation to interact regularly with the individual, and observe the individual's interest and motivation with those partners. Discuss options with the individual's significant others to prioritize the partner relationships to be developed initially.

Partner outcomes identify the person(s) who will participate in the communication opportunity with

the individual. When possible, initial partners should be persons who already have some relationship with the individual, and who are motivated to increase their interactions together. Later partners may be those who have frequent opportunities to interact with the individual, or who are present in situations where improved communication will make a significant impact on the individual's life.

Note: Partner outcomes identify the partners who will be participating in the communication opportunities with the individual. Later, partner strategies will be selected to provide the identified partners with a selection of strategies that can be effective when implementing the plan for the individual's success in achieving communication.

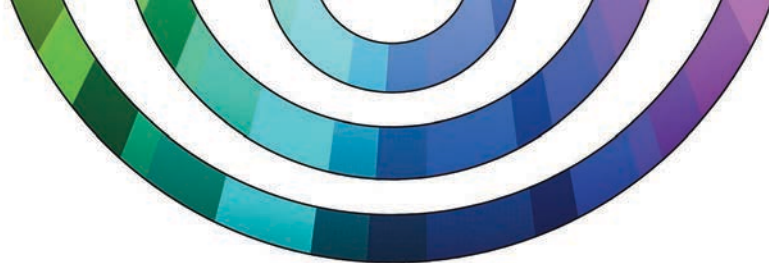
Expanding Intervention Across Environments, Opportunities, and Partners

Teams can continue to modify the plan until the individual achieves some communication success. Once the individual has achieved success in at least one environment during a few opportunities and with one to two key partners, it's time to update the plan.

Updated plans should continue to build on the communication that has been established while expanding to new environments, opportunities, and partners. Teams should use the same process used in the initial planning and modification. Envision the individual's life as a web of communication. Intervention should be viewed as building the individual's capacity to communicate across his daily life by adding environments, opportunities, and partners as needed until successful communication is achieved throughout the individual's daily life.

Sample Partner Outcomes

- Jamie will participate in familiar classroom activities with his teacher frequently (1–7 times a day).
- Chris will expand her network of communication partners to include a regular caregiver, Irma, 3 times a week.
- Keshon will participate with a peer during recess at least once a day (combines opportunity and partner).



STEP 2

Assess Communication, Then Plan for Change

Assessment and Intervention Process	Process Tools from <i>Achieving Communication Competence</i>
Chapter Three: First, assess the individual's communication skills.	Inventory of 11 Essential Communication Skills (Appendix B)
Then, select and record the individual's communication skills, present level of performance, and projected level of the outcomes for intervention.	Communication Outcome Selection Guide (Appendix B) Communication Intervention Plan (Appendix B)
Select Intervention Guides: Attach Communication Skill Guides that match plan.	Intervention Guides: Communication Skills (Appendix D)
Chapter Four: Next, select and list messages, and develop screens for those using AAC	Message Selection Guides (Appendix B) Communication Intervention Plan (Appendix B)
Select Intervention Guides: Attach Communication Opportunity Guides that match plan.	Intervention Guides: Communication Opportunities (Appendix C)
Chapter Five: Then, select and record partner strategies	Partner Strategy Selection Guide (Appendix B) Communication Intervention Plan (Appendix B)
Select Intervention Guides: Attach Partner Strategy Guides that match plan.	Intervention Guides: Partner Strategies (Appendix E)

Outcomes	Guidance
Skill Outcomes	<ul style="list-style-type: none"> • Strive for .5–1 point change in scale value from the current assessment. • Increase participation first. • Address the interests of significant others. • Use Communication Goal Selection Guide to write skill goals.
Message Outcomes	Include unaided and aided messages to: <ul style="list-style-type: none"> • Initiate. • Participate. • Terminate. • Select messages about people, actions, objects, and emotions.
Partner Strategies	<ul style="list-style-type: none"> • Choose 1–3 strategies to begin. • Add new strategies as partners begin to see changes in the individual's interactions.