

Augmentative and Alternative Communication Intervention

*An Intensive, Immersive,
Socially Based Service Delivery Model*

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Socially Based Service Delivery Model*

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Preface

The intervention approach described in this book merges the author's experiences working as a school-based speech-language pathologist (SLP) and training aspiring graduate student clinicians. Through her experience as a school-based SLP, she recognized the inadequacies of current models in meeting the intervention needs of many of the students on her caseload. In spite of employing what was deemed best practices in working with students with complex communication needs (CCNs), many of these students remained bereft of communication.

Initially devised as a means to provide communication sciences and disorders graduate student clinicians with hands-on experience, Chapman University's *All About Communication* (AAC) Camp evolved into an exemplary alternative school-based service delivery model. Striving to emulate a camp experience, AAC Camp is provided to students with CCNs as a component of their extended school year (ESY) program. ESY refers to special education and related services (e.g., speech-language intervention, occupational therapy) that are provided to a student beyond their normal school year in order to prevent the excessive loss of skills or deterioration of behavior that is likely to occur in the presence of an extended break (Individuals with Disabilities Act [IDEA], 2004). In participating schools, select students, referred to as campers, leave their special education classes to attend "camp" for two weeks where they participate in various camp-themed activities, including daily camp fire time, nature hikes, scavenger hunts, and arts and crafts. Graduate student clinicians who assume the roles of "communication guides" scaffold communication opportunities within these experiences while employing language stimulation techniques. These techniques include modeling, expansionism, and self-talk through the application of aided language stimulation and augmented input to create a language-rich immersive environment. Utilizing a child-centered approach (Paul & Norbury, 2012), communication guides teach campers to use core vocabulary across a wide range of activities, expanding the purposes for which they communicate (Dodd & Gorey, 2013; Dodd & Hagge, 2014). Campers' response to the intervention is monitored throughout the two-week period. Given this intense block of intervention, students with CCNs are able to firmly establish newly acquired skills. The purpose of this book is to introduce this alternative, school-based service delivery model that was devised to address the unique needs of students with CCNs.

The intervention model discussed in this book is designed to facilitate a novice AAC user's communication skills by guiding them in acquiring skills and strategies in using their AAC systems effectively, while progressing them towards increased levels of communicative competence (ASHA, 2004; Light, 1989; Light & McNaughton, 2014). This is accomplished by utilizing natural

interactions and experiences and immersing the child in his or her AAC language. The intervention model described in this book enhances successful communication and minimizes social barriers (e.g., language gap) by providing training and support to communication partners and guides.

CHAPTER 1: INTRODUCTION

There is a subgroup of children within the category of individuals with CCNs for whom developing even the most fundamental aspects of communication is an arduous task. These children are the focus of the intervention model described in this book. This chapter describes the intervention needs of these children and explains why current intervention approaches (e.g., PECS, Milieu Training, Functional Communication Training) are failing to meet their needs. This chapter also highlights the importance of essential aspects of communication as discussed by key researchers in the field of AAC and autism (Light, 1989; Wetherby & Prizant, 1989). Common AAC myths will be dispelled once and for all.

CHAPTER 2: INTERVENTION AS A PROCESS

Intervention, particularly as it relates to AAC, is a dynamic process—constantly shifting in response to a student’s reaction to the intervention and their changing communication needs. This dynamic process is best conceptualized by Schlosser, Koul and Costello’s (2007) adaptation of Garland and Björck-Åkesson’s (2005) definition of intervention as a “a super-ordinate concept for the different intentional steps taken to change the behaviors or attitudes of person interactions, procedures, events or environments in a desired direction” (p. 232). Intervention, as it reflects this definition and pertains to AAC, is a series of intentional steps taken towards an identified goal. In this case, the goal is to establish a language-rich environment to support the novice AAC user’s achievement towards greater levels of communicative competence. These intentional steps, referred to as phases, are based on, and include, activities related to assessment, intervention planning, and ultimately implementation of the intervention (Schlosser, Koul, & Costello). This chapter will introduce the intensive, immersive, socially based intervention model, which is the focus of this book, including a brief description of each phase of the intervention process.

CHAPTER 3: ASSESSMENT PHASE

The purpose of assessment is threefold: (1) determine if a student would benefit from an AAC system; if so, (2) identify the appropriate AAC system based on the student’s abilities and communication needs, and (3) guide

educational planning. This chapter will provide specific details regarding the assessment phase of the intervention process, including a discussion regarding how AAC assessments differ from traditional assessments of speech and language skills. An overview of different assessment models and their contribution to the intervention process is included. The final section of this chapter will discuss how to apply information gleaned from assessment to the intervention planning and implementation phases.

CHAPTER 4: INTERVENTION PLANNING PHASE

This chapter focuses on the planning phase of the intervention process. The chapter begins with a discussion of the different types of vocabulary, and the rationale and importance of teaching core vocabulary, while gradually expanding a student's fringe vocabulary. Symbol sets and systems are discussed, as well as how consistent placement of icons assists students who have difficulty with picture discrimination. Strategies to create a symbolically rich environment so the student with CCNs can be immersed in his/her language system throughout their day are reviewed. Included are strategies to adapt children's stories to make them more meaningful to symbolic communicators. The importance of training support staff on key components of this intervention model and a training outline are shared.

CHAPTER 5: INTERVENTION IMPLEMENTATION PHASE

The overarching goal of AAC interventions is to improve AAC skills (Binger, Berens, Kent-Walsh, & Taylor, 2008). An AAC-based intervention approach not only promotes AAC skills, but facilitates acquisition of communication skills, supports a student's understanding of language, and improves oral language. This chapter presents the intervention implementation phase, including application of language-based intervention strategies to AAC. Example lesson plans are provided and instructional strategies are outlined.

CHAPTER 6: PROGRESS MONITORING

Progress monitoring, as it relates to students with disabilities, is the scientific practice of assessing a student's progress and evaluating the effectiveness of an intervention (IDEA, 2004). Monitoring a student's progress is not only good clinical practice, but a mandate under federal law (IDEA, 2004). This chapter will discuss the importance of progress monitoring as it relates to the intervention process, including how to write goals across Light's (1989) four competency areas. This chapter includes sample goals and progress-monitoring strategies, complete with suggestions for collecting and reporting students' progress.

CHAPTER 7: CASE EXAMPLES

The longest of the seven chapters illustrates the intervention approach from theory to practice. The case examples presented in this chapter will illustrate the implementation of the intervention program described in this book with nine students. The students in these case examples represent children with a range of diagnoses and disorders, each with their own unique set of communication needs. Key aspects of the intervention process are highlighted throughout each case example.

HOW TO GET THE MOST FROM THIS BOOK

Whether you are interested in running an AAC Camp or Clinic for your students, or just want to learn how to more effectively work with students who are learning to communicate through the assistance of AAC, this is the book for you! It is strongly suggested you read through the entire book to really understand all the components that go into planning and implementing an evidence-based AAC intervention. Then continue to use this book as a resource as you develop a similar program for your students. Examples of how to develop present levels of performance (PLOPs) are presented throughout Chapter 3 and embedded in the case examples shared in Chapter 7. Additionally, use the goals presented throughout these two chapters to develop individualized educational plans (IEPs) for your students. In the appendices you will find examples of how to develop your own adapted stories and activities that really work with this population. Also included in the appendices are resources you will refer back to again and again. On the accompanying PluralPlus companion website, you will be able to download forms you can use for the purposes of data collection and progress monitoring, as well as a sample letter you can send home to parents to inform them how to use the “School-to-Home” book, bridging what you are doing with their child at school, to home.

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CHAPTER 1

Introduction

Communication is the essence of human life.

—Light, 1997, p. 61

Communication is an innate, complex task that most of us don't think much about. It just happens; in fact, we do it all day long with little attention to how we do it or why we do it. This seemingly effortless act is wrought with challenges for those with the most complex communication needs (CCNs). Children (and adults) with a wide range of disabilities face many challenges associated with the quintessential act of communicating. Individuals with CCNs— which is how they are collectively referred to in the field of augmentative and alternative communication (AAC)—find this innate task unsurmountable. So who are these children with CCNs? Children with CCNs are not children with a specific diagnosed disorder, but rather a cluster of children whose disabilities significantly impair their ability to access communication via traditional means (i.e., oral language). It is not a single disability but a variety of disabilities with one thing in common: an absence of functional communication. Children with CCNs may have a diagnosis of autism, Down syndrome, cerebral palsy, or intellectual impairment. Each child's individual challenges hinder their ability to develop functional communication skills (Dodd & Gorey, 2014).

There is a subgroup of children within this broader category for whom even developing the most basic communication skills, such as those necessary to fulfill immediate wants and needs, is an arduous task. Children with the most severe forms of autism are often among these individuals. Children unable to develop a functional form of communication often present with severe deficits in receptive and expressive language skills and poorly measured levels of cognition, which are further compounded by deficits in social communicative functioning (SCF) (Dodd, 2010). Examples of SCF in an emergent communicator include the ability to establish joint attention, respond to bids for interaction, and initiate interactions (Dodd, 2010; Dodd, Franke, Grzesik, & Stoskopf, 2014). These, often undeveloped, skills severely impact

the ability of students with CCNs to use their communication systems. Nonetheless, in spite of intense efforts to apply what has been deemed evidence-based practice (EBP) in working with children with CCNs, both in theory and practice, there remains a cluster of children bereft of communication skills.

The single most important skills we can teach an individual with CCNs is communication. Exceeding the ability to write one's name, sort objects by color, and imitate motor gestures, communication is directly associated with greater levels of independence. These children not only need to gain access to a means to communicate, they have to learn how to communicate, and more importantly, they need to develop a sense of the value of communication. The intervention model described in this book blends what we know about evidence-based practices related to working with children who are learning to communicate with the support of AAC, and those with autism and other developmental disabilities.

AUGMENTATIVE AND ALTERNATIVE COMMUNICATION

Many children with CCNs will inevitably rely on augmentative and/or alternative forms of communication at some point in their lives, either to support their development of oral language, supplement their oral language, or as their primary means of communication. The International Society for Augmentative and Alternative Communication (ISAAC, 2016) describes AAC as:

a set of tools and strategies that an individual uses to solve everyday communicative challenges. Communication can take many forms such as speech, a shared glance, text, gestures, facial expressions, touch, sign language, symbols, pictures, speech-generating devices, and so forth. Everyone uses multiple forms of communication based upon the context and our communication partner. Effective communication occurs when the intent and meaning of one individual is understood by another person. The form is less important than the successful understanding of the message. (<https://www.isaac-online.org/english/what-is-aac/>)

Communication boards, electronic speech-generating devices (SGDs), gestures, and sign language are all examples of AAC. The American Speech-Language-Hearing Association (ASHA, n.d.) describes AAC as:

... all forms of communication (other than oral speech) that are used to express thoughts, needs, wants, and ideas. We all use AAC when we make facial expressions or gestures, use symbols or pictures, or write. People with severe speech or language problems rely on AAC to supplement existing speech or replace speech that is not functional. Special augmentative aids, such as picture and symbol communication boards and electronic devices, are available to help people express themselves. This may increase social interaction, school perfor-

mance, and feelings of self-worth. AAC users should not stop using speech if they are able to do so. The AAC aids and devices are used to enhance their communication.

As these definitions demonstrate, AAC can take many forms based on the needs of the individuals. For the purposes of this book, the term “communication system” will be used as a generic term in reference to any type of communication system, including non-technology-based communications systems such as communication boards and books, along with high-tech dynamic display type communication systems. For a review of terms related to AAC refer to Table 1–1.

Use of Terms to Describe Early Communicators

A number of terms have been used to describe students (and adults) who are in the early stages of developing communication skills. Early communicators (one such term) use both symbolic and non-symbolic forms of communication, with or without communicative intent (Beukelman & Mirenda, 2013; Snell, 2002; Wetherby & Prizant, 1989). Wetherby and Prizant, based on their research, concluded that communicative behavior, including both symbolic and non-symbolic forms of communication, is considered intentional “if the individual has an awareness or mental representation of the desired goal” (p. 77). Maladaptive behaviors such as hitting, biting, or throwing oneself on the floor serve various communicative functions, such as to escape or avoid an unpreferred activity. They are frequently non-intentional on the part of the communicator. Communicative acts such as these become “communicative” in nature based on adult elucidation of communicative intent (Wetherby & Prizant, 1989). That is, adults impose meaning to these behaviors (e.g., “Oh he doesn’t want to come to the table”) and respond accordingly. Repeatedly responding to non-intentional, non-symbolic behaviors in a consistent manner reinforces the continued use of these behaviors for obtaining a desired outcome to the point that these non-symbolic forms of communication become intentional on the part of the communicator. Examples of non-symbolic forms of communication include eye gaze, gestures, vocalizations, facial expressions, body language, and behaviors. Manual signs, picture symbols, and words are examples of symbolic forms of communication (Beukelman & Mirenda; Snell; Wetherby & Prizant). Given this dichotomy of terms, the following terms are proposed to describe the abilities of early communicators: *pre-intentional non-symbolic communicator*, *intentional non-symbolic communicator*, and *intentional symbolic communicator*. Intervention teams may find using these terms helpful in explicitly describing the communication skills of early communicators.

In addition to *early communicator*, the terms *beginning communicator*, *emergent communicator*, and *emergent AAC communicator* are often applied to

Table 1–1. AAC Terms

Term	Definition
Unaided Communication Systems	Gestures, body language, and sign language are examples of unaided communication systems. Unaided communication systems rely on the user’s body as a means to convey messages.
Aided Communication Systems	Aided communication systems encompass both technology- and non-technology-based tools and strategies that a communicator uses to aid with communication.
Dedicated System	A dedicated system refers to equipment specifically designed to operate as a communication aid.
Speech-Generating Device	A speech-generating device (SGD), also referred to as a voice output communication aid (VOCA), is an <u>electronic augmentative and alternative communication (AAC)</u> system with voice output capabilities. These types of communication devices allow the user to select words or messages to be spoken out loud. There are a wide variety of SGDs available, ranging in complexity and cost.
Digitized Speech Output	A time-sampled replication of actual human speech. Live recordings the AAC user can use in the context of a communicative interaction. Generally speaking, digitized speech is more natural sounding than synthesized speech in terms of pitch, resonance, and prosody.
Synthesized Speech Output	Letters, words, or symbols that are translated into computer-generated speech. Most high-tech SGDs offer a range of computer-generated voices to allow the AAC user to choose their voice.
Traditional Grid Display	Traditional grid displays organize symbols in columns and rows, frequently by parts of speech. This type of display can be used to promote sentence structure and word order.
Cell	This is an area on a device that corresponds to a vocabulary item or message, and can be selected and activated. The term “button” is sometimes used synonymously. For the purposes of this book, the term “cell” will be used.
Selection Technique	This is a method an AAC user uses to identify or select items on their communication systems for the purposes of communication. The two primary selection techniques are direct selection and scanning.
Direct Select	This is a selection technique in which the AAC user directly selects or activates an item on their communication system through pointing. The AAC users who use direct selection frequently use their index finger, a pointer, or eye-tracking technologies to select desired icons.

continues

Table 1–1. *continued*

Scanning	Scanning is a selection technique frequently used by individuals with significant motoric limitations, who are unable to independently directly select items. In this technique, items in the selection set are highlighted or scanned. When the desired icon is reached, the AAC user indicates their desire for the highlighted item through the most easily accessible method, such as head nodding, vocalization, or activation of a switch.
Static Display	Static or fixed display communication systems are low-tech communication systems in which the location of symbols remain constant. The total number of cells an AAC user has access to is limited to the number of symbols that can fit on a single page. Given an opportunity to engage in a different topic or activity, the AAC user would need to switch to another page. This generally requires the assistance of a facilitator. GoTalk and 7-Level Communicators are examples of low-tech fixed display communication systems.
Dynamic Display	Dynamic display communication systems are high-tech communication systems in which individual cells, when activated, can link to other pages. These were once considered only an option for cognitively competent AAC users, however, with early exposure to advanced technologies such as the iPad, this technology is very intuitive to young AAC users.

Source: Definitions adapted from Beukelman & Mirenda, 2013.

those who are acquiring communication through the use of AAC. According to Beukelman and Mirenda (2013), *beginning communicators* refers to individuals who use non-symbolic forms of communication, either intentionally or non-intentionally, to fulfill immediate wants and needs. Also, within this categorization are individuals who are emerging in their use of symbolic communication (i.e., aided or unaided forms) to convey basic messages, as well as individuals who are emerging in their use of AAC technologies. Additionally, they use the term *emergent AAC communicator* to describe individuals who present with profound delays in the areas of language and cognition secondary to severe neurological trauma. Frequently, all modalities of language and cognition are affected. These individuals require intervention approaches to assist them in understanding and gaining control of their personal environment. These particular individuals need to begin by developing foundational, or precursor skills, prior to the introduction of AAC. Review of available resources indicates the terms *beginning* and *emergent communicators* are often used synonymously to describe individuals, children, and adults, who are developing the skills necessary to establish themselves as communicators.

The author of this book would like to suggest the use of a term to recognize children who are “verbal” but not yet communicative: *functionally nonverbal*. Students who have learned scripts and readily imitate (echolalic) are often described as being verbal when in application or functionality they are not. Labeling a child such as this as “verbal” can, in fact, hinder their progression towards becoming a spontaneous verbal communicator. It is not uncommon for others to assume because they are “verbal” they are communicative and therefore not a candidate for AAC. However, given the visual support of an AAC system such as a low-tech communication board or book, many of these children can and do learn how to use oral language functionally. Refer to Myth #3 for further discussion regarding the fallacy of this direction of thinking.

For the purposes of this book, the terms *beginning* and *emergent communicator* are used to refer to students in general who are in the early stages of developing their communication skills. If a more specific or descriptive term is warranted, then one of the other terms will be used.

WHAT ARE THE INTERVENTION NEEDS OF STUDENTS WITH COMPLEX COMMUNICATION NEEDS?

Students with complex communication needs, particularly those who are the target of the intervention presented in this book, need an intervention program that capitalizes on their strengths, and advances them toward greater levels of communicative competence. Communicatively competent individuals use communication effectively to manage their environment and engage in meaningful interactions. Students with autism and other communicatively hindering disabilities possess strengths in their ability to make sense of information conveyed in a visual medium (Mesibov, Shea, & Schopler, 2005). In fact, many of these students gravitate and demonstrate improved performance when information and expectations are expressed to them visually in forums such as visual schedules and choice boards. In addition to maximizing visual supports, students with CCNs who are in the emergent stages of learning to communicate need an intervention that:

- ◆ Embraces a developmental approach to language acquisition
- ◆ Builds vocabulary skills recognizing the significance of early acquired words
- ◆ Extends communication skills beyond requesting preferred food items and objects
- ◆ Fosters independent use of their communication system
- ◆ Uses visual supports to model language and create a language-rich environment
- ◆ Blends evidence-based practices for working with children learning to use AAC and children with autism and other developmental disabilities
- ◆ Teaches application of communication within naturalistic contexts