

**“YOU DON’T KNOW WHAT YOU DON’T KNOW UNTIL YOU KNOW IT”:  
PERCEPTIONS, PRACTICES AND IMPLEMENTATION OF AUGMENTATIVE  
AND ALTERNATIVE COMMUNICATION (AAC) FOR STUDENTS WITH  
COMPLEX COMMUNICATION NEEDS**

by

Esley D. Newton

An executive position paper submitted to the Faculty of the University of Delaware in partial fulfillment of the requirements for the degree of Doctorate of Education in Educational Leadership

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## **ABSTRACT**

Roughly 50 percent of students participating in the alternate assessment who are pre-symbolic or emergent communicators do not have access to Augmentative and Alternative Communication (AAC). The Systematic Processes for Enhancing and Assessing Communication Supports (SPEACS) Initiative was created more than 6 years ago to address the lack of access to AAC for students with complex communication needs attending Delaware public schools. Through a cross-case analysis, this study aims to define the components of successful AAC implementation by investigating the integration of literacy within AAC, best practices in literacy instruction for individuals with complex communication needs, current practices in Delaware, components of effective educator professional development, as well as measures to promote program sustainability. Investigation of these components results in recommendations and considerations for future implementation of the SPEACS framework, professional learning opportunities for Delaware educators working with students with complex communication needs, as well as practices around literacy instruction for students with complex communication needs.

*Keywords:* Augmentative and alternative communication, complex communication needs, significant cognitive disabilities, literacy

## **Chapter 1**

### **INTRODUCTION**

The Adapting Curriculum and Classroom Environments for Student Success (ACCESS) Project at the University of Delaware's Center for Disabilities Studies in collaboration with the Delaware Department of Education has led the Systematic Processes for Enhancing and Assessing Communication Supports (SPEACS) Initiative since the 2013-2014 school year. SPEACS has worked with over 80 school-based teams over the past 6 years. Based on student pre- and post assessment data, all participants have made some gains in both expressive and receptive communication. Data show that school-based teams are satisfied with the professional development and technical assistance provided by the SPEACS state team. However, there is evidence suggesting that sustainability of SPEACS practices may not be occurring under the current model.

First, too many students are failing to make the leap from communicating at the pre-symbolic to the symbolic language level. The lack of students progressing to communicate at the symbolic language level may stem from the fact that literacy is not a primary part of the SPEACS framework. Research suggests that literacy is a vital part of AAC and that literacy instruction is necessary for individuals to be successful AAC users. Second, across multiple years, SPEACS continues to receive applications from school staff that have previously participated in the initiative with other students. Further, students with complex communication needs in classrooms with students taking part in SPEACS often do not have access to AAC and there is no indication of

SPEACS practices being implemented with these students. The repeated submissions of applications by previous SPEACS school team participants and lack of generalization of SPEACS evidence-based practices to other students with complex needs suggest there is an issue with sustainability.

This study investigated the link between AAC and literacy, practices related to professional development and measures to promote sustainability, and sought to define the components of successful literacy instruction for students with complex communication needs.

The term Augmentative and Alternative Communication (AAC) has varying degrees of meaning. Historically, the field of AAC has struggled to develop standards for terminology (Zangari, Lloyd & Vicker, 1994). Due to the wide-range of perspectives, it is essential that I define AAC early on as anchor for this study. AAC is an all-encompassing term that Koppenhaver (2000), defined as a hybrid of communication strategies, skills, tools, processes and products, including literacy. AAC also includes Assistive Technology (AT), which is defined as aided tools to improve the skills, abilities, lifestyle and independence of those with disabilities (Glennen & DeCoste, 1997). For me, AAC encompasses all of these components, but most importantly it enables students with no or limited speech greater access and meaningful participation in all aspects of life, including the academic curriculum. It provides individuals with a means to show what they know and promotes communicative and cognitive competence.

## **Communication Needs of Students with Significant Cognitive Disabilities**

There are approximately 1100 students participating in Delaware's Alternate Assessment (Delaware Department of Education, 2017). In a multistate study, Kleinert, Kearns, Towles-Reeves and Kleine-Kracht Thomas (2011) found that roughly 50% of students participating in the alternate assessment who are described as pre-symbolic or emergent communicators based on the Learner Characteristics Inventory (LCI), do not have access to Augmentative and Alternative Communication (AAC). Data from the LCI showed that expressively, 13-19% of individuals taking part in the alternate assessment use understandable modes such as gestures, points, and objects to communicate. Between 8-11% use cries, facial expressions, change in muscle tone to communicate, but have no regular use of gestures, pictures, or similar methods. Receptively, 44-55% respond to 1-2 step directions via spoken, signed, or printed words and 36-44% need additional cues to respond to directions. Data showed that there is a slight change in expressive communication at the pre- and emerging symbolic levels across elementary, middle, and high school for these students. These students are entering and exiting school at the pre-symbolic language level. Despite the presence of communicative intent, many students with significant cognitive disabilities taking part in the alternate assessment do not have access to AAC (Kearns, Reeves, Kleinert, & Thomas, 2011).

Lack of access to AAC is a critical issue that has far-reaching implications for students with significant cognitive disabilities. These individuals who have complex communication needs, needing AAC are at considerable risk in many aspects of their

development: (a) functional communication skills, (b) speech, (c) language, (d) cognitive/conceptual, (e) literacy, (f) social participation, (g) access to education, and (h) overall quality of life. Intervention is critical to address these areas and provide successful and functional outcomes. AAC offers the potential to enhance communication, language, and learning for children with significant communication needs (Drager, Light, & McNaughton, 2010). There are several factors that contribute to the lack of AAC provided to these students. First, there is a critical shortage of speech-language pathologists, who have the competencies needed to implement evidence-based practices in AAC (Light, Drager, McNaughton, Wilkinson, Finke, Currall & Roberts, 2014). Second, interveners may be unaware of strategies to stimulate communication and progress students from pre-symbolic to more consistent, understandable communication levels (Binger, Kent-Walsh, Ewing, & Taylor, 2010). Last, administrative support and the attitudes and perceptions of individuals with significant cognitive disabilities may be additional factors.

### **Delaware Context**

The overarching goal of SPEACS is to create an effective and sustainable framework that seeks to ensure that all students have a reliable means of communication in place before exiting Delaware schools. SPEACS uses a data-driven and collaborative approach to assist school-based teams in developing and implementing comprehensive communication programs for students with the most complex communication needs attending Delaware public schools.



The design of the SPEACS Initiative was to assist school teams in progressing students from pre-symbolic to symbolic communication. To do this, SPEACS gave professional development to district level teams made up of speech-language pathologists, special and general educators, administrators, other related service personnel, and family members. Teams attend an initial two-day workshop that focused on recognizing communicative intent, interpreting communicative behaviors, developing action plans to address communication programming, exploring augmentative and alternative communication options, infusing communication skills and targets into the academic curriculum, and strategies for building communicative competence.

Beyond this training, observation of the classrooms occurred on an as-needed basis with a minimum requirement of two per year (one at the beginning and end of the school year). SPEACS state team members used an observation rubric during classroom observations, which served as a fidelity tool for the program. Monthly coaching calls are conducted where teams review data and adjust strategies for implementing communication action plans. Teams also complete a variety of student assessments to determine the students' current level of expressive and receptive communication. The Learner Characteristics Inventory (LCI), Expressive and Receptive Communication Rater (ERCR) and the Communication Matrix are assessment tools administered by school teams and the SPEACS state team at the beginning and end of the school year. Both the school and state team members complete these assessments for purposes of inter-rater reliability. See Table 1 for

more information on SPEACS data collection instruments. The SPEACS state team consists of members from the University of Delaware's Center for Disabilities Studies as well district and state specialists that have expertise in a variety of areas. The state team members provided support to school teams on a consultative basis dependent upon the needs of school teams. SPEACS school-based teams also receive training on an area of need in the spring of each year in addition to ongoing technical support. Please refer to the logic model in Appendix A for more information regarding the SPEACS framework.

### **Scope of Participation**

SPEACS initiated its sixth cohort this school year (2018-19). As shown in Table 2, 80 school-based teams have taken part in SPEACS over the last six years. These teams represent students from 9 LEAs and 27 schools/programs.

Table 1. *SPEACS Data Collection Source*

Types of Data	Student	School Staff	Parent	State Team
Learner Characteristics Inventory (LCI)	Collected Oct & May			Collected Oct & May
Expressive and Receptive Communication Rater	Collected Oct & May (piloted cohort3)			Collected Oct & May
Communication Matrix	Collected Oct & May Began collected Cohort 2			Collected Oct & May
Communication Target Goal	Collected every 3weeks			
Participating Personnel Survey		Collected in April		
End of the Year Wrap Up Survey		Collected in May		
Parent Questionnaire			Collected in October and May	
Classroom Observations		Collected in October and May		

Table 2. *SPEACS Districts and Schools*

	Cohort 1	Cohort 2	Cohort 3	Cohort 4	Cohort 5	Cohort 6
Districts	4	6	6	5	4	5
Schools/Programs	6	8	11	13	12	7
Teams	9	11	16	16	13	15

## **Coaching and Professional Development**

I have been an Instructional Coach and most recently a Program Manager for the ACCESS Project at the Center for Disabilities Studies, University of Delaware for over 8 years. ACCESS continues to be a lead professional development provider to educators working with students with disabilities in Delaware public schools. The ACCESS staff has developed, led and implemented multiple initiatives since 2011 centered on access to the general education curriculum for students in Delaware schools. I have had the opportunity to work with Delaware educators in a variety of capacities, as a coach, professional learning community (PLC) facilitator, and professional development leader. The Delaware Department of Education (DDOE) currently funds the ACCESS Project. The current professional development model is aligned and evaluated with Guskey's Five Levels of Professional Development; endorsed by the DDOE. The five levels of evaluation are as follows: Level 1: Participant Reactions, Level 2: Participant Learning, Level 3: Organization and Support Change, Level 4: Use of Knowledge and Skills, and Level 5: Student Learning Outcomes (Guskey, 2003).

High-quality professional development is a central component in nearly every modern proposal for improving educational outcomes. Although professional development programs vary widely in their content and format, most share the common purpose of changing professional practices, beliefs, and understanding of educators toward an articulated end (Guskey, 2002). Through multiple professional

learning opportunities, SPEACS aims to provide high-quality professional development to increase the competency of Delaware educators, students, family, and other community members to support the academic and communication needs of students with the most significant cognitive disabilities.

Guskey and Yoon's (2009) work described high-quality professional development as one that begins with providing educators with active and authentic job-embedded opportunities to learn to use a practice and engage in the evaluation of their experiences.. These learning opportunities must ensure that educators have the necessary knowledge, skills, support, and opportunities to learn. This requires leaders to commit to making learning a priority for both students and school staff, which in turn leads to academic success. Added key components of effective professional development consist of creating an environment that fosters open communication and one where educators feel they can experiment and take risks in the classrooms. Another tenet of effective professional development is tapping into internal expertise of the school or program. The final principle is collaboration. Collaboration benefits both professional development recipients and the school. Practices become better when implemented by teams as opposed to individuals. Information transfers more across classrooms, programs, and schools. Collectively everyone gets better, rather than one person (Hirsch & Killion, 2009). Over the years, ACCESS has focused on adding components to their professional learning framework that align with Guskey's levels 4 and 5. The SPEACS Initiative is one that provides participants with in-depth coaching, modeling of communication strategies, classrooms observations, and an

emphasis on data collection and collaboration across school and home environments. SPEACS collects data related to goals tied to both educators and student outcomes.

Teacher change does not rest solely on professional development, but on the experience of successful implementation. Teachers believe in a new practice or strategy if they have seen it work and it is that experience that shapes their beliefs and attitudes. Guskey (2002) stated that attitudes and beliefs about teaching are largely derived from classroom experience. Educators, who have been consistently unsuccessful in helping students from disadvantaged backgrounds to reach ambitious standards of learning, are likely to believe that these students are incapable of academic excellence. For example, one of the greatest barriers that ACCESS continuously faces across initiatives, including SPEACS, is educators' lack of belief and application of the *Least Dangerous Assumption* (LDA, Donnellan, 1984) when making student-centered instructional decisions. The LDA is based on the premise that in the absence of conclusive data, educational decisions should be based on the presumption of competence. This lack of belief is reflected throughout the multiple data sources that ACCESS collected on educator's knowledge and implementation of strategies and tools across initiatives. As evidenced in classroom observations, coaching sessions, survey responses, informal meetings, casual conversations, as well as workshop evaluations. Educators have often reported on workshop evaluations that students are "too low" to meaningfully participate in standards-based instruction or that content did not address students with "low ability". Other evaluations stated, "students need functional life skills and that academic instruction would not be

meaningful to their students”. In coaching sessions, comments included that the “student is working on sitting in their seat and are not able to attend to other tasks/activities”. One participant stated, “I do not believe in the Least Dangerous Assumption”. This lack of application of LDA has far-reaching implications ranging from perpetuating low student expectations, adoption of the belief in a fixed mindset, lack of participation and buy-in related to initiatives improving teacher practice, lack of self-reflection, decreased opportunities for students to participate and engage in the general education curriculum, lack of student-centered decision making, and an unwillingness to implement evidence-based practices in classroom instruction.

In order to impact teacher beliefs there are several principles that are essential in planning effective professional development programs including: recognize that change is gradual and a difficult process for teachers, ensure that teachers receive regular feedback on student learning progress, and provide continued follow-up, support, and pressure (Hirsch & Killion, 2009). Professional development and coaching are integral to the SPEACS framework. Table 3 illustrates the intensity and amount of coaching provided, and the number of coaching sessions conducted across cohorts. During the earlier cohorts, SPEACS only conducted coaching over the phone. Also, note that the kickoff for each cohort occurs in October of each year with the exception of the 2013-14 cohort that began in January 2014.

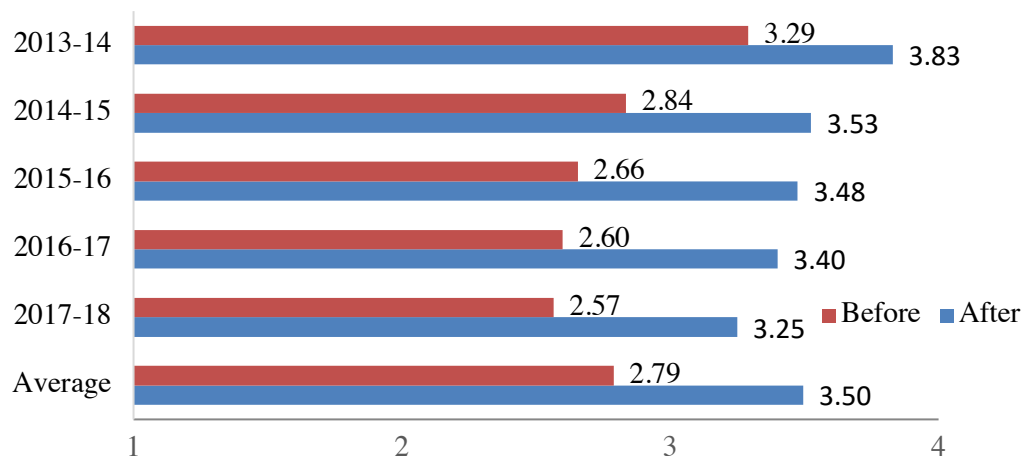
Table 3. *Number of SPEACS Coaching Events*

2013-14	2014-15	2015-16	2016-17	2017-18
40	88	127	135	128

SPEACS also conducts an annual two-day workshop for participants in the fall of each year. For these sessions to have an impact on participants' knowledge and preparedness to implement, the workshop must present content accessible to all participants and meet participant's learning needs (Guskey, 2002). The collection of evaluation data occurred after all SPEACS workshops to assess the impact of the professional development on participants' knowledge and skills. Upon completion of the initial workshops, participants rated their level of understanding of and preparedness to implement the SPEACS strategies, prior to and after the workshop. Figures 1 and 2 show participant perceptions regarding workshop content across the last 5 cohorts. On average, professional development participants reported moderate to extensive impacts on their knowledge ( $M=3.50$ ) and preparedness to implement ( $M=3.45$ ) the SPEACS strategies covered in these sessions. Gains in participants' knowledge of SPEACS practices ranged from 0.54-0.83 across cohorts, with greatest gains (0.83) reported at the 2017-18 workshop, and lowest (0.54) at the 2013-14 workshop. Gains in participants' preparedness to implement SPEACS strategies ranged from 0.55-1.12 across cohorts. The 2014-15 workshop had the greatest gains (1.22) in participants' pre/post preparedness and lowest (.55) at the 2013-14 workshop.

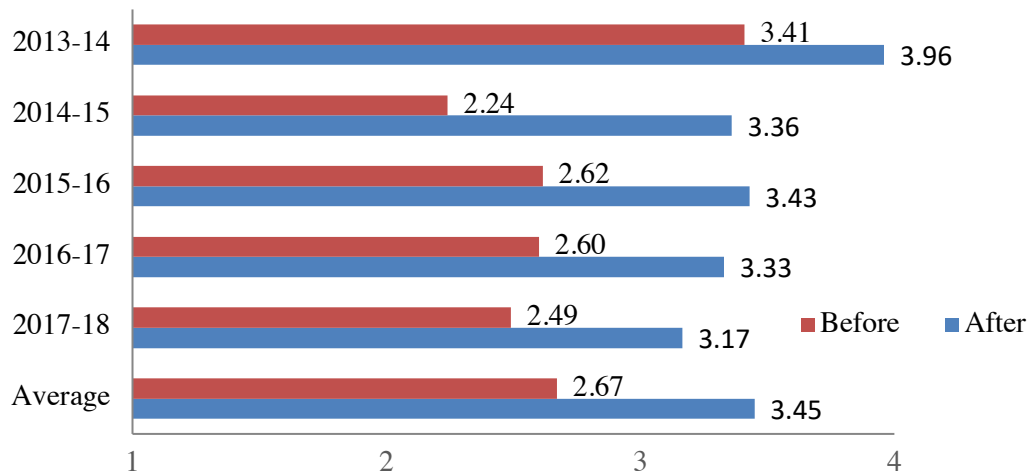


Participants' knowledge of SPEACS practices has steadily increased each year. This could be attributed to the change in delivery methods that began during the 2014-15 school year. During the 2013-14 school year, all coaching sessions were conducted over the phone. Classroom observations and modeling of communication strategies were not included in the SPEACS framework. Professional learning consisted of a two-day initial workshop and monthly coaching calls. Since that time, the addition of classroom observations, in-person coaching, professional development opportunities for paraprofessionals, and modeling of communication strategies have been included within the framework. These changes could be attributed to the spike in participants' preparedness during the 2014-15 workshop. The low level of gains related to the knowledge of and preparedness to implement SPEACS practices reported at the 2013-14 workshop could be attributed to the limited professional learning opportunities available to participants at that time.



*Figure 1. Knowledge of SPEACS strategies*

Note: Scale: 1 = None, 2 = Little, 3 = Moderate, 4 = Extensive

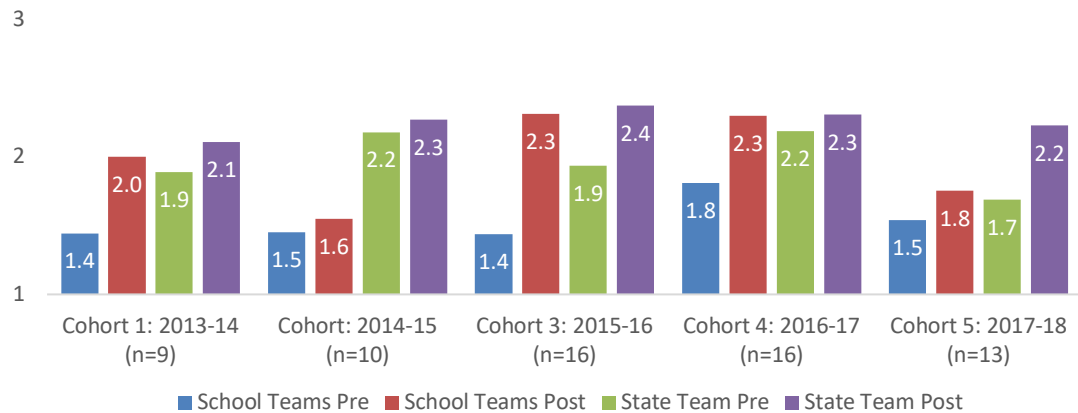


*Figure 2.* Preparedness to implement SPEACS strategies  
 Scale: 1 = None, 2 = Little, 3 = Moderate, 4 = Extensive

### Concerns about Sustainability

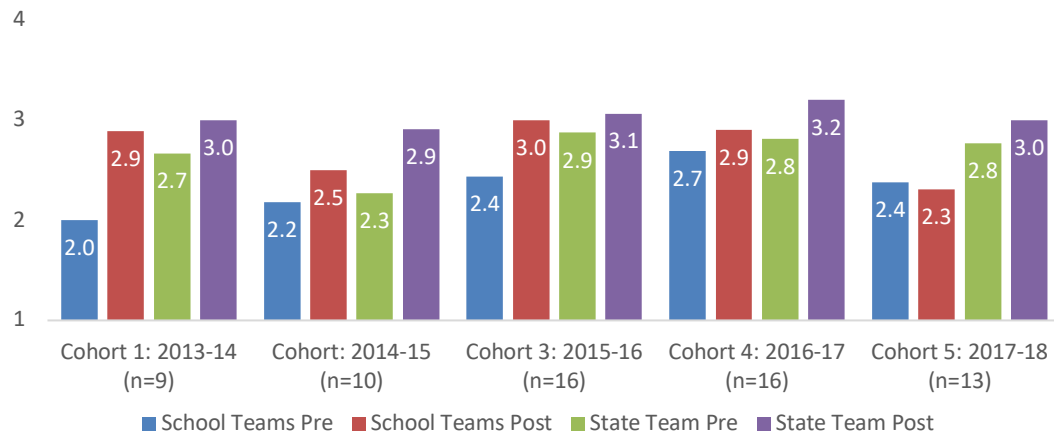
SPEACS evaluation data showed that professional development and coaching sessions are impactful as they relate to teachers’ beliefs of their knowledge and preparedness to implement SPEACS strategies, but there appears to be a breakdown in the current framework at the organizational or systems levels. Despite the number of professional development workshops, coaching sessions, and classroom observations conducted by SPEACS staff, impacts on student outcomes and organizational capacity within schools, programs, and districts continue to remain at a minimum. This raises concerns about sustainability of the model.

SPEACS data from across cohorts shows that students are consistently making small gains in expressive and receptive communication. Figures 3 and 4 show pre- and post-data across school and state teams on the Learner Characteristics Inventory.



*Figure 3. LCI - Expressive Communication*

Scale: 1 = Student communicates primarily through cries, facial expressions, change in muscle tone, etc. 2 = Uses intentional communication, but not at a symbolic language level. 3 = Uses symbolic language to communicate



*Figure 4. LCI - Receptive Communication*

Scale: 1 = Uncertain response to sensory stimuli. 2 = Alerts to sensory input. 3 = Requires additional cues to follow 1-2 step directions. 4 = Independently follows 1-2 step directions presented through words.

Despite these gains, on average, students participating in SPEACS are not making the leap from pre-symbolic to symbolic communication. There is growing research that indicates that literacy instruction at emerging and conventional levels is vital for students with complex communication needs (Erickson, Hatch & Clendon, 2010). This is a critical component that is overlooked in the SPEACS framework. SPEACS currently uses a fidelity tool that consists of an observation rubric, however, there are components missing from the rubric that may be critical elements impacting student acquisition of AAC. For example, literacy instruction is a component that is not included as an indicator of fidelity on the rubric.

In addition, the lack of application of SPEACS practices to students with complex communication needs not identified as SPEACS participants raises sustainability concerns. A number of school-based team participants provide services to multiple students with complex communication needs. Observations and coaching sessions indicate that students who are not SPEACS participants lacking access to AAC are not receiving intervention using SPEACS practices and strategies.

### **Improvement Goal**

The investigation of literacy in AAC and the ways of integration within the SPEACS framework is a critical part of this study. The overarching goal is to create an effective and sustainable framework for the SPEACS initiative. Through this effort, the hope is to improve literacy and communication outcomes for students with complex communication needs attending Delaware public schools. This study

investigated the relationship between AAC and literacy, components of effective professional development for educators, as well as sustainability measures in order to better determine the supports and resources needed to assist educators in making symbolic communication and conventional literacy a reality for students with complex communication needs.

## **Chapter 2**

### **THE BLUEPRINT**

The organization of this chapter is by the primary components that make up the overall structure of this study. To explore the research questions, the notion of the presumption of competence (Donnellan, 1984) as it relates to AAC and literacy and Weiss's Theory of Change (Weiss, 1995) are employed. Elements from these concepts serve as the means for the evaluation of the SPEACS framework.

#### **Importance of Literacy Development for AAC Users**

Light and McNaughton (1993) discussed the mounting evidence of research that showed that the development of functional literacy skills is in jeopardy for students who use Augmentative and Alternative Communication (AAC). The authors noted, "without these skills individuals who use AAC systems are severely restricted in their access to educational and vocational opportunities" (p. 33). According to Light and McNaughton, elevated expectations of parents and teachers are primary factors that influence a student's progress in reading and writing development. Good and Brophy (1984) discussed the ways expectations affect behavior, and how behavior affects how individuals respond. To expand this notion, Parker (2013) suggested that "Perception drives expectation, expectation drives opportunity, opportunity drives achievement, and achievement drives perception" (para 2).

Koppenhaver, Hendrix and Williams (2007) identified barriers to literacy acquisition for individuals with severe speech and physical impairments (SSPI). They found that approximately 70% of 90% of students with SSPI lag behind same-age

nondisabled peers in measures of reading and writing. Koppenhaver and colleagues (2007) identified vocabulary and phonological awareness as greatest areas of difficulty for these individuals. Literacy acquisition continues to be a low priority area due to a number of factors. Speech, physical needs and concomitant disorders as well as family focus on medical, self-care and therapeutic needs have been identified. In addition, lack of transfer of AAC knowledge across environments, the absence of shared goals among families, interventionists, and school teams, as well as ineffective classroom literacy instruction lacking interaction and application continued to be prevalent barriers to literacy acquisition for individuals with complex needs.

Traditionally, multidisciplinary teams that provide services to students with complex communication needs have focused on issues of face-to-face communication and issues of access to assistive technology. More recently, there has been growing evidence that to be optimally effective, these teams also need to address literacy development. Currently, there is a growing body of evidence that students with significant cognitive needs that are AAC users benefit from a structured, comprehensive literacy curriculum (Erickson, 2017). Characteristics of successful interventions include individualized programs using student strengths and personal interests as a basis for developing wider language and literacy competence, often supported using assistive technology. Interweaving general education content and a richer variety of peer interaction opportunities to support conventional literacy growth is another proven approach (Koppenhaver, Hendrix & Williams, 2007).

One barrier that often surfaces in conversations with educators about literacy is the functional life skill versus academics balance debate. Finding the balance between functional life skills and academics is definitely a challenge, but when it comes down to it, there is nothing more functional than literacy. Literacy is an academic and important life skill. Educators must change their belief of literacy instruction and realize that without these skills, everything else is inaccessible. We can no longer make decisions about giving or restricting access to instruction based on disability categories or perception of cognitive function. "If communication is the essence of human life, " then literacy is the essence of a more involved and connected life (Koppenhaver, 2000, p. 270).

### **Rethinking the SPEACS Framework**

The current SPEACS framework (see Appendix A) is one that perpetuates the distinction between literacy and AAC by addressing them as two separate entities. Koppenhaver (2000) stated that "without literacy, there is no AAC", which is a statement that has caused a significant amount of self-reflection and challenging of my own thinking regarding AAC and all that it encompasses (p. 270). By challenging my previous notions of AAC and gaining a better understanding of this relationship, it is my hope that the synthesis of information undertaken in this study will culminate in the development of a more effective and sustainable SPEACS framework that considers the many facets that impact a program's effectiveness. Emergent literacy can represent powerful statements of growing communicative competence, but this is not enough. Conventional literacy must be the goal for all individuals and it must also



be the goal for SPEACS. If not, then I have compromised my own beliefs by not adhering to the Least Dangerous Assumption (Donnellan, 1984). I consider literacy and communication fundamental rights. Through the reevaluation of the SPEACS framework, my hope is to be able to provide effective support to Delaware educators implementing AAC (including literacy) for students with complex communication needs.

For this to be a reality, comprehensive literacy instruction must be a provision that moves beyond matching, sight word recognition, and vocabulary identification. SPEACS must move toward an integrated model of communication. Present AAC instruction often ignores the communal aspects of communication and views it as an isolated ability (DeThorne, Hengst, Fisher & King, 2014). Communication requires multiple skills, including conversation, literacy, and language, and integration of those skills should be embedded into the learning process as early as possible. A more integrated model of communication would incorporate support for conversation and socialization and this includes social skills, literacy and language skills (DeBaun, 2016).

### **Theory of Change**

To further evaluate the components of the SPEACS framework, certain aspects of Weiss's *Theory of Change* (1995) were considered. Theory of Change is the how and why an initiative works. The theory explained how activities within an initiative or program contribute to the chain of results that lead to the intended or unintended outcomes. Theory of change can be useful to assist with the early development of a

program or it can be useful as a tool to promote continuous program improvement through systematic evaluation. An effective theory of change has three important components: it should be plausible, doable, and testable (Connell & Kubisch, 1998). Theory of change promotes the involvement and engagement of stakeholders regarding the goals and processes of an initiative. The theory of change approach was selected because in order to design an effective program one must dig beyond knowing whether an activity works, but how it works (Weiss, 1998).

SPEACS data showed that there was a breakdown within the framework that may have contributed to the lack of generalization of SPEACS practices across classrooms servicing students with complex communication needs. To gain a deeper level of understanding, it was important to gain the perspectives of stakeholders participating in the SPEACS Initiative and to focus on program components and program dynamics rooted in context (Weiss, 1998). This would allow for a more holistic approach that considered the interconnectedness of all subsystems as well as the integration of factors of influence (Jorani, 1994). This approach also encouraged deeper consideration of program components for a revised program logic model that considered the factors of AAC in literacy, areas of effective teacher professional learning practices, and program measures of sustainability

## **Research Questions**

To uncover the various contributing factors that may be affecting SPEACS sustainability, the following questions guided the study.

RQ1: What do current and previous SPEACS school team participants feel is needed to implement, generalize, and sustain the SPEACS framework within their schools and districts?

RQ2: What models of literacy instruction are there for students with complex communication needs?

RQ1: What is current practice in Delaware schools?

RQ2: What recommendations can be derived from the literature and current research initiatives?

RQ3: How can literacy instruction be incorporated within the SPEACS framework to promote sustainability of evidence-based practices?

The first question targeted the issue of evaluation of the SPEACS framework by addressing the supports and resources that district staff feel are necessary to implement SPEACS once funding for face-to-face professional development and individual technical assistance is no longer supported by DDOE. The second question focused on the components of literacy instruction for students with complex communication needs. Chapters 3 and 4 include the methods and results for the first two questions. The third question was the guiding question for synthesis and discussion of results and addressed in Chapter 5 Discussion.

## **Chapter 3**

### **METHOD**

To evaluate the SPEACS framework a variety of qualitative data collection methods including a document review, individual interviews, focus groups, and teacher observations were conducted for this study. The qualitative data review and analysis methods employed looked to better understand the components needed for SPEACS participants to implement and sustain the framework's practices within their school districts/programs with fidelity. Educator and parent perceptions regarding literacy instruction for students with complex communication needs and current classroom practices in Delaware schools were examined. Also evaluated were components of model literacy programs in other states to better understand best practices and the ways they could enhance the effectiveness and sustainability of the SPEACS framework.

### **Data Collection**

#### **SPEACS Practices**

To better evaluate current SPEACS practices, a document review, individual interviews, a focus group, and classroom observations were conducted involving previous and current program participants. A review of meeting minutes from coaching calls from the 2016-17 and 2017-18 cohorts constituted a document review to evaluate components of the SPEACS framework. The documents reviewed included a total of 87 meeting minutes across two years for a total of 29 school-based

teams. Second, third, and final coaching meeting minutes were reviewed for each team.

In addition to the document review, a focus group consisting of five individuals who were previous and current SPEACS participants were conducted. Focus group participants received a recruitment email. This email went out to 250 individuals. The initial goal was to conduct a minimum of three focus groups, two consisting of Delaware educators and one exclusive to parents. Unfortunately, there were a limited number of responses to recruitment emails as well as difficulty coordinating meeting times that worked for those that showed interest. As a result, a combination of focus groups and interviews were conducted.

The focus group included a special education director, speech-language pathologist, Teacher of the Deaf and Hard of Hearing, an Assistive Technology Specialist, and special education teacher. Participants represented two of three counties in Delaware. The focus group gave insight into participant's experiences within the SPEACS initiative. Participants supplied feedback on the process and reflected on the components that worked well and discussed those that could need improvement. Participants also discussed their professional development experiences and thoughts on the implementation of literacy instruction for students with complex communication needs. See Appendix B for the protocols for the focus group.

In addition to the focus group, four interviews with previous and current SPEACS' participants were conducted to potentially gain further insight into each educator's experiences regarding the SPEACS process. Participants consisted of three

special education teachers and one parent. Participants represented all three counties in Delaware. Individual interviews served as a suitable alternative to focus groups. Interview allowed for a more in-depth discussion of the topics. See Appendix C for the protocol for individual interviews.

### **Models of Literacy Instruction**

To gain a better understanding of the models of literacy instruction for students with complex communication needs on a national level, as well as the literacy practices currently implemented in Delaware schools for students with complex communication needs, a series of interviews and classroom observations were conducted.

Two informal interviews occurred with researchers/experts in the field of AAC currently implementing literacy programs for students with complex communication needs. These discussions gave a better understanding of the ways in which literacy instruction can support beginning communicators, as well as the specific strategies and skills that need addressing to make literacy accessible and meaningful for students with complex communication needs. The protocol for these interviews is provided in Appendix D.

In addition to the discussions with expert researchers, three interviews occurred with special educators implementing literacy instruction with students with complex communication needs attending Delaware public schools. These educators taught in specialized settings, with two being part of a general education school and

the other in a separate school. Participants represented all three counties in Delaware, which provided additional insight as to the varying degrees of practices across the state.

Prior to the interviews for each of these participants, observations were conducted to gain further insight into classroom features and characteristics across a variety of areas including the learning environment, student population, general and literacy-specific practices being implemented. The observation rubrics were implemented that reflected components of best practices in literacy instruction for students with complex communication needs. For classroom observations, two rubrics assessed the components of AAC and literacy instruction. The first rubric was adapted from the existing SPEACS classroom observation rubric. Added to the rubric were target components based on key concepts in the areas of AAC and literacy (Erickson, 2017; Light, McNaughton, Weyer & Karg (2008). The second observation rubric is from the Project-CORE website (A Stepping-Up Technology Implementation Grant Directed by the Center for Literacy and Disability Studies [Project-CORE], (n.d.), which is from UNC-Chapel Hill's Center for Literacy and Disability Studies.

Classroom observation rubrics targeted evidence of the following components: practices rooted in the areas of reading instruction, adaptations to reading materials, literacy skills taught in a meaningful way and embedded across activities, use of personally relevant connections, age-appropriate materials used for instruction, curricular materials used to sustain student interests, implementation of research-based instructional strategies, implementation of accessible lessons that promote meaningful

participation, a minimum of 30 minutes of literacy instruction per day, and consistent implementation of AAC strategies. The Project CORE rubric takes a deeper look at the communication system used by students, as well as the strategies adults are using to acknowledge and facilitate communication. These strategies may consist of providing adequate wait time for students to respond and initiate, encouraging symbolic behaviors, and modeling core vocabulary. Observation rubrics are in Appendices E and F.

### **Analysis**

Major themes were derived from the literature across the areas of AAC in literacy, effective educator professional learning practices, and sustainability practices as discussed in Chapters 1 and 2. Themes served as a priori codes applied to the document review, transcripts from interviews and focus groups, as well as classroom observations. The elements extracted from the literature were concepts determined as critical elements essential to effective AAC intervention and effective program implementation. Analysis of the documents, and categorizing the evidence produced the following a priori codes: collaboration, self-reflection, professional responsibility, data-driven decision-making, implementation of AAC, and presumption of competence. Evidence was highlighted and themes were marked in the document margins. Descriptors were written for each code and evidence received classification. All codes were reviewed for commonalities and categorization. During this review, open coding was also used to identify themes that emerged during the analysis. Additional codes that emerged consisted of: SPEACS resources, planning, and



empowerment. After the initial review of the meeting minutes a second review was completed for verification.

Audio recordings from interviews and focus groups were transcribed.

Transcripts were reviewed line by line and a priori codes developed from the literature were used to begin categorizing evidence. Transcripts were reviewed for a second time to identify additional themes and open codes. See Table 4 below a complete list of codes and definitions.

Table 4. *Codes and Definitions*

Codes	Definitions
Collaboration	Team members working together to meet the needs of students. Possible indicators of team collaboration consist of but are not limited to effective communication, sharing responsibilities, working together to achieve the same goal or purpose.
Professional Responsibility	Professional duties relate to a particular position. Responsibilities include the standards and expectations associated with a particular job.
Data-driven decision-making	Collecting data related to a targeted goal. Making decisions related to instruction and programming that is informed by data when applicable.
Presumption of Competence	Presuming that all individuals are competent and capable of understanding and learning a wide variety of concepts across disciplines, including the general education curriculum. Promoting high expectations for all students; the belief that all individuals can achieve.
Implementation of AAC	Implementation of strategies that promote the use of AAC for students with complex communication needs. Can include the implementation of strategies such as modeling, aided language stimulation, acknowledging all forms of communication, etc.
SPEACS Resources	SPEACS state team providing tools and resources to school-based teams to assist with AAC implementation
Planning	Evidence of lesson planning, planning ways to provide communication opportunities throughout the day, or planning for embedding communication across activities, contexts, people, etc.
Empowerment	Evidence that a team is motivated and taking initiative. Implementing a program, strategy or process with minimal support.
Self-reflection	Evaluation and analysis of one's own practices.

After completing the focus group and interview analysis, data analysis of classroom observations occurred using a priori codes created from the document analysis, interviews, and focus groups.

Cross-verification of data from classroom observations and individual interviews served as a method of triangulation. Individual interviews also served to verify evidence observed in classroom observations and gain further insight into the perceptions and beliefs regarding literacy instruction for students with complex communication needs, considerations, planning, and practices.

Overarching themes appeared following the review of all documents and initial coding. During data analysis, it was important for me to acknowledge my own influence and reflect on the way my experiences as a classroom teacher, instructional coach, program manager, and principal investigator shaped the analysis and interpretation of all data sources for this study. Following interviews and focus groups, I followed up with participants to make sure the information I captured was reflective of their experiences. In addition to these response checks, I also kept a book of memos to trace my thoughts throughout the process. During the data analysis, I also had discussions with colleagues regarding the process and findings, as well as the categories and codes developed.

## **Chapter 4**

### **RESULTS**

Results of this study are organized by the first two research questions guiding this study. The first question examined the current SPEACS framework. The second focused on finding literacy practices implemented in model programs for students with complex communication needs, as well as literacy strategies practiced in Delaware serving these students. The third study question focused on synthesizing the information gleaned from questions 1 and 2. This synthesis is in Chapter 5 Discussion. Related recommendations follow in Chapter 6.

#### **RQ1: Current SPEACS Practices: Evaluation and Participant Perspectives**

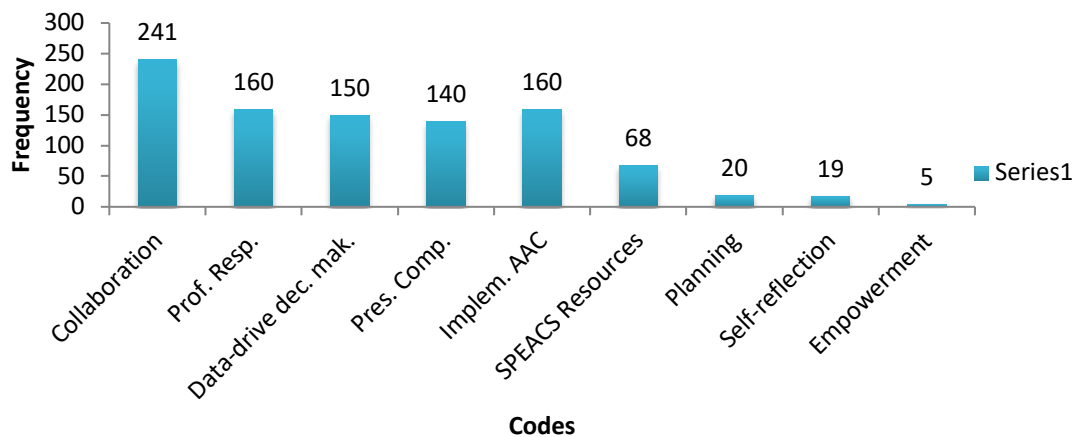
To address sustainability issues within the SPEACS framework I needed to get a better sense of the current practices. To gain deeper insight into the programming and processes, I targeted the question below through a document review of meeting minutes, a focus group, and individual interviews.

RQ1: What do current and previous SPEACS school team participants feel is needed to implement, generalize, and sustain the SPEACS framework within their schools and districts?

Data collection methods used in this study determined the organization of the results beginning with broad (document review) and then moving to those that provide more insight into specific issues (interviews, classroom observations).

## Document Review

To address this question a document review of meeting minutes from six school teams across a two-year period occurred. A total of 87 meeting minutes across six teams over a two-year period were reviewed. See Figure 5 below for summarized data.



*Figure 5.* Positive indicators of program implementation

As displayed in Figure 5, findings from the document review showed the concept of collaboration 241 times across 87 documents, professional responsibility, and implementation of AAC were evidenced 160 times followed by data-driven decision-making-150 times, the presumption of competence-140 times, SPEACS resources-68 times, planning-20 times, self-reflection-19 times, and empowerment-5 times. These indicators served as a priori codes except for SPEACS resources,

planning, and empowerment. These three were open codes that were initially categorized as "other."

### **Focus Group**

In addition to a document review, a focus group that consisted of five individuals who were previous and current SPEACS participants was conducted. The focus group included a special education director, speech-language pathologist, teacher of the deaf and hard of hearing, an assistive technology specialist, and special education teacher. Participants represented New Castle and Kent Counties in Delaware. Results from the focus group are organized by three major foci of the protocol: complex communication needs and AAC, SPEACS impact, and literacy.

**Complex communication needs and AAC.** The focus group began by asking participants questions related to Complex Communication Needs and AAC. The first question examined participants' understanding of AAC. Responses varied and included light-tech, mid-tech, and high-tech devices. Modalities such as Picture Exchange Communication System (PECS) and pictures were first responses. One participant stated that AAC was, "anything other than verbal", another person added that it "helps the child communicate wants and needs".

Focus group participants had an average of 10 years experience working with students using AAC. When asked about the most pressing priorities for students using AAC, participants identified the following: lack of consistency and fidelity with implementation, not sticking with something long enough, and getting a system in

place earlier instead of waiting to see if speech develops. Several participants mentioned that too often the wait-and-see approach is the method of choice because there is the misconception of seeing AAC as a barrier to speech development. Another priority mentioned was the lack of Speech Language Pathologist's expertise in AAC.

Regarding AAC implementation, participants discussed the most popular modalities and programs used in their districts/programs. PECS, iPads with Proloquo2go and LAMP, Dynavox devices, PODD, adaptations of the PECS protocol, and single switches were reported as the most frequently used.

**SPEACS impact.** When specifically asked about the impact that SPEACS had on communication programming for students and their professional practice, one participant reported that they felt that SPEACS was moving too fast for the student and school team. The participant stated that the, "student was still working on discrimination skills and was not ready to trial a device". Additional responses included coaching sessions occurred too frequently, the responsibility of data collection often fell on one person when it is a shared responsibility across team members. Participants also mentioned the need for modeling of communication strategies and more in-depth coaching around specific topics. More time during the initial workshop focusing on the goal selection and development process was suggested, while another participant commented on the comprehensiveness of the SPEACS Action Plan and appreciated the goal being broken into components to assist with development and implementation.

**Literacy.** When asked about the features of literacy instruction practiced in classrooms and/or buildings, most participants referenced pre-packaged literacy curricula such as Pathways to Literacy, Unique Learning Systems (ULS), and the Dynamic Learning Maps Essential Elements. One participant specifically talked about their experience with ULS implementation within their program and stated, "We are just doing it. It doesn't seem like it builds on anything...it does not spiral". Several participants mentioned that they like the News 2 You program within the ULS curriculum because of the current events component. Others commented on the level of adaptations needed in order to make curriculum accessible to students with complex communication needs and viewed this as a significant barrier to implementation. One participant stated that often times prepackaged curriculum does not have anything to offer students with complex communication needs because of the level of adaptations and enhancements needed to make it accessible. Another person commented on how overwhelmed teachers are by adaptations and proposed that the ACCESS Project create literacy boxes with adaptations applied. In terms of reporting on the literacy skills being taught in classrooms serving students with complex communication needs, matching, vocabulary, and phonemic and phonological awareness for younger students were skills emphasized. When asked about assessment of literacy skills, participants mentioned using checklists.

The next set of questions addressed professional learning opportunities related to literacy instruction. Participants reported the 2018 DE Inclusion Conference as the only offering. One participant received PD related to literacy instruction as part of an



Assistive Technology (AT) certificate program they were completing. Aside from this, participants report that there have not been district/state PD offerings on this topic.

When asked about their thoughts on the types of resources Delaware educators would need to support students with significant communication needs and how conventional literacy could be a priority, participants reported that teachers do not have strategies. One participant pointed to pre-service prep programs' lack of focus on academic coursework for students planning to instruct students with severe disabilities. Coursework has a heavier focus on the application of behavioral strategies than the academic curriculum.

### **Individual Interviews**

In addition to the focus group, four individual interviews with previous and current SPEACS' participants were conducted to potentially gain further insight into educators' and parent experiences regarding the SPEACS process. Participants consisted of three special education teachers and one parent. Participants represented New Castle, Kent, and Sussex counties. As with the focus group results, findings are organized under the headings of complex communication needs and AAC, SPEACS impact, and literacy.

**Complex communication needs and AAC.** As with the focus group, interview participants answered a series of questions related to complex communication needs and AAC. Participant responses were similar to the focus group

participants. One participant stated, “AAC provides them with a way for them to communicate”. Another person reported, “AAC was a way for them to communicate other than verbal”.

Across interview participants, the average number of years of experience working with students using AAC was 8 years except the parent. The parent has a 5-year-old son who uses AAC.

The next set of questions discussed the different types of AAC used with students with complex communication needs. Those mentioned were modified sign language, an iPad with Proloquo2go, LAMP and PECS.

In terms of barriers to the implementation of AAC, participants reported lack of knowledge across team members regarding AAC practices, lack of consistency and communication across home and school environments, stressing other modalities over a high tech device, and lack of access to AT.

**SPEACS impact.** When asked about the impact that SPEACS had on their student or child's communication programming and practices, interview participants reported that coaching sessions and email check-ins were helpful, "coming in and diving into working with the student", helping to develop measurable goals, and the scheduling of time to meet as a team to talk about their child were reported as impactful.

**Literacy.** Interview participants were also asked about literacy practices being used in their classrooms or at home with their students/children. Responses included teaching at different levels using rotating centers, using district curricula and teaching

strategies such as Attainment, Discrete Trial Teaching to work on letter identification, Unique Learning Systems, apps, reading storybooks, and use of a multi-sensory approach to teach letter identification and sounds.

When asked about the professional learning opportunities offered, participants reported the DE Inclusion Conference and ACCESS trainings as the only workshops attended that covered components of literacy instruction.

In terms of what interview participants thought was necessary to support literacy instruction for students with significant communication needs in Delaware, participant responses consisted of access to curriculum materials, professional development on specific strategies, the carryover from home to school environments, and inclusion.

### **RQ2: Models of Literacy and Delaware Practices**

To gain deeper insight as to the models of effective literacy instruction for students with complex communication needs, the following questions were addressed through interviews with researchers recognized as experts in the early work on literacy for students with complex communication needs. Additional classroom observations and teacher interviews explored related practices in Delaware.

RQ2: What models of literacy instruction are there for students with complex communication needs?

RQ<sub>1</sub>: What is current practice in Delaware schools?

RQ<sub>2</sub>: What recommendations can be derived from the literature and current research initiatives?

## **Researcher Interviews**

To help answer the questions above two informal interviews occurred with researchers in the field implementing literacy programs for students with complex communication needs. These conversations helped me gain a better understanding of the ways in which literacy instruction can support beginning communicators, as well as the specific strategies and skills that need addressing to make literacy accessible and meaningful for students with complex communication needs. Discussions with both participants focused heavily on the ways in which literacy can be useful as a vehicle to facilitate communication for students with complex communication needs. Expert participants were researchers who were speech-language pathologists having extensive experience working with AAC users.

When asked about what literacy instruction should look like in classrooms, participants stressed the importance of taking a comprehensive approach to literacy instruction. One recommendation as a starting point was to integrate and model the universal core words across classroom activities and embed communication opportunities throughout daily and academic routines. In addition, literacy instruction should occur daily. One participant recommended looking at the Project CORE website. Project CORE supports the implementation of core vocabulary and provides educators working with AAC users with significant intellectual needs a variety of teaching and implementation supports.

When asked which literacy skills should be targeted in literacy instruction, one participant said that skills should be based on content from the National Reading Panel

recommendation and should focus on the primary components of reading instruction: phonemic and phonological awareness, phonics, vocabulary development, reading fluency, and comprehension. Participants also reported that strategies such as shared reading, predictable chart writing, independent reading and writing, and alphabet and phonological awareness are evidence-based instructional approaches that can be used with emergent readers.

In terms of ways to facilitate parent involvement and support literacy in the home environment, participants reported that getting parent support with the implementation of practices at home has been challenging and that this has been a difficult piece to figure out. It was stated that parent involvement seems to rely heavily on factors such as SES, location of the school and parent presence within the school.

### **Classroom Observations**

To gain added insight into literacy practices currently implemented in Delaware serving students with complex communication needs, three classroom observations were conducted along with individual interviews. Participants consisted of three special educators teaching in specialized settings, with two a part of a general education school and the other in a separate school. Two classrooms consisted of students in the lower elementary grades (K-3) and the third classroom consisted of middle school students. Participants represented all three counties in Delaware, which provided additional insight as to the varying degrees of practices across the state.

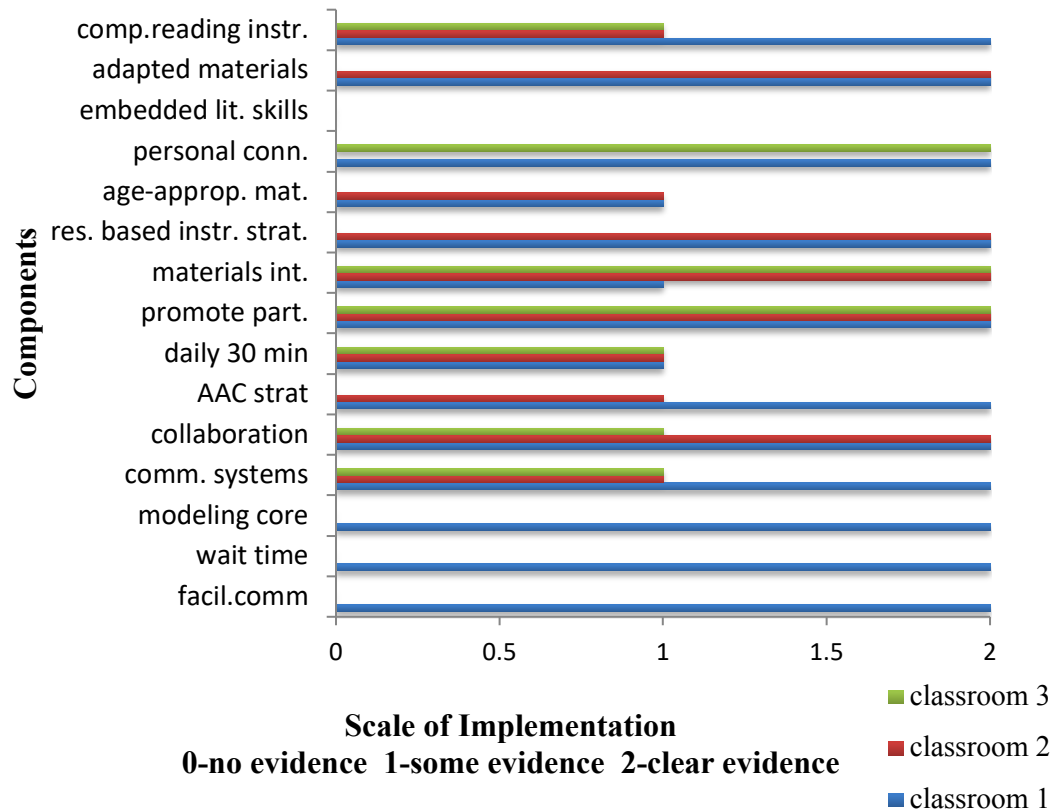


Figure 6. Observation components

Data in Figure 6 shows the only component implemented with clear evidence across all classrooms was "lessons that are accessible and promote participation". Components such as "all students having communication systems", "collaboration" and "comprehensive reading instruction", were observed in all classrooms, but the evidence was not clear. The component of "embedding literacy skills throughout the day" was not observable in any classroom since classroom observations lasted an average of 1.5 hours.

## **Teacher Interviews**

In addition to classroom observations, individual interviews with observation participants were conducted. Individual interviews served to triangulate evidence from classroom observations and to also gain further insight into the feelings and beliefs about literacy instruction for students with complex communication needs.

**Complex communication needs and AAC.** The first few interview questions addressed AAC and the types teachers used. Responses to these questions yielded similar responses from the focus group and interviews conducted with SPEACS participants. In regards to AAC, participant responses ranged from “picture symbols paired with American Sign Language”, “assigning meaning to unintelligible utterances”, as well as “a way to communicate”.

In terms of participant experiences working with students with complex communication needs, the average across all three participants was seven years. All interview participants were currently instructing students using AAC.

**Literacy Instruction.** In terms of the implementation of literacy instruction, respondents discussed the importance of linking literacy to student experiences and things students like. One participant specifically talked about implementing independent writing in classroom instruction and attributing meaning to the scribbles on students' papers. In terms of practices that are most effective with teaching students with complex communication needs, routine, structure, “changing up the content and keeping the process the same”, and repetition were all reported.

As for the adaptations needed to increase accessibility of literacy instruction, the participants mentioned scaffolding, large letters, and tactile representation. In terms of assessment of literacy skills, vocabulary, answering "wh" questions, and assessing students at the beginning and end of the week were discussed as current practices.

**Professional support.** The next set of questions addressed the topics of professional development related to literacy instruction and collaboration. All three participants reported that there have been no district or statewide PD on literacy topics. When asked about collaboration opportunities with other content specialists and related service personnel, one participant reported "there are no PLCs for special education teachers". Another participant stated that the physical therapist is more collaborative than the other related service providers and that speech typically does pullout.

Participants also discussed the supports in place that have assisted educators with implementing literacy instruction for students with significant cognitive disabilities. Participants stated the DE Inclusion Conference, educators' background experiences, the DE Grade Band Extensions and the Dynamic Learning Maps Essential Elements have been primary supports.

Participants were also asked about methods use to engage parents in supporting literacy at home. One participant reported that parents were initially excited, but in about a month books stopped coming back to school. Another participant stated that she is planning on giving literacy homework next school year.



## **Chapter 5**

### **DISCUSSION**

#### **Integrating Literacy into the SPEACS Framework**

The final question of this study addressed the ways in which incorporation of literacy instruction can occur in the SPEACS framework to promote sustainability of evidence-based practices. To address this question, data supporting the answers to previous questions were synthesized.

#### **Professional Development Issues**

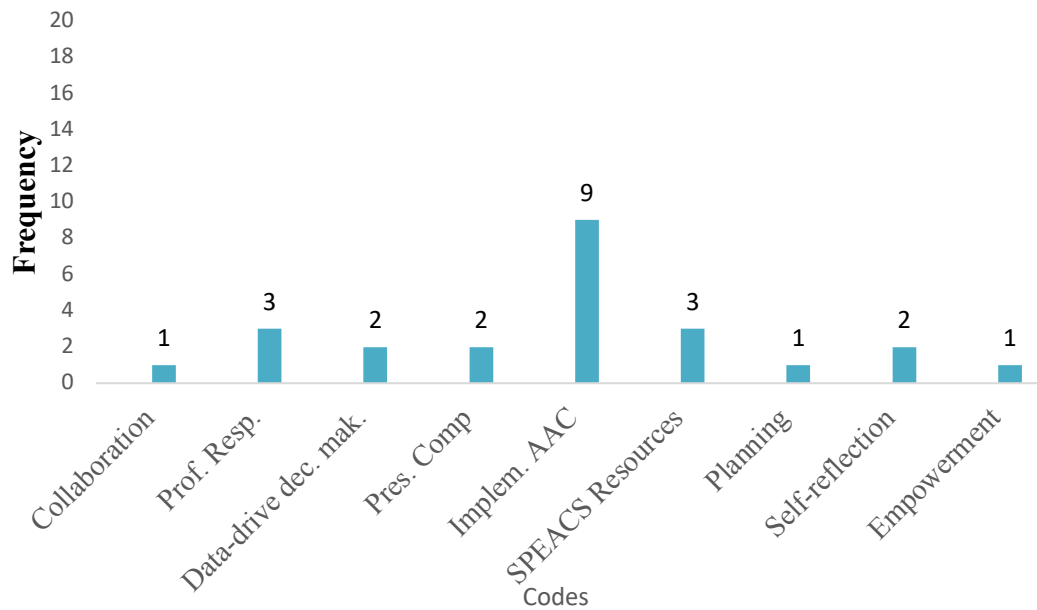
Focus group participants stated that there is a need for more in-depth professional learning opportunities. Participants stated that “one and done PDs are not effective”. School teams would like for SPEACS instructional coaches to model the use of communication and literacy strategies. Lesson planning is also a component that participants identified as a need. Teachers stated they require assistance with developing a lesson from start to finish. Another need that surfaced is for the development of model lessons for teachers to implement with the hope that they will be able to develop and implement the next lesson on their own. Participants reported “teachers want to feel like they have a partner in the work... and not feel like they are being told what to do”.

Data from the three interviews conducted, indicated that in order for school-based teams to sustain the SPEACS framework within their schools, professional

development on specific strategies was necessary, in addition to access to curriculum materials.

These findings are consistent with SPEACS professional development evaluation data in Figures 1 and 2 on pages 12 and 13. Across SPEACS cohorts, participants have experienced consistent gains in pre-post knowledge regarding their level of understanding of SPEACS strategies. This increase could be attributed to the changes in the framework after the 2013-14 cohort. Since that time, professional development opportunities have expanded and consist of a combination of in-person and distance coaching, classroom observations, and modeling of communication strategies. Each year, SPEACS strives to provide participants with more individualized and in-depth professional learning opportunities, which in turn may assist with the acquisition of content knowledge.

As I read through the transcripts from the focus groups and interviews searching for evidence of the a priori codes previously applied to the document review, I was surprised to see that there was not much evidence from these transcripts that could be classified into these codes. When I selected these codes prior to the data analysis I consciously framed these indicators from a positive perspective. See Figure 7 for summarized data.



*Figure 7. Positive Indicators of Program Implementation*

The indicator evidenced the most frequently was the implementation of AAC. Indicators with the lowest frequency were collaboration, planning, self-reflection, and empowerment. Upon further analysis there is supporting evidence that validates the infrequency. Statements such as "educators are overwhelmed by adaptations" can confirm the lack of educator empowerment and teacher self-reflection. In addition, it was also stated that educators need support with lesson planning, but that quickly grew into a need for the adapted literacy kits. As a professional development provider, I know all too well the difference between "supporting" versus "doing for". Additionally, the evidence of a lack of empowerment can also be an indicator of the lack of self-reflection. Critical-thinking and self-reflection appear to be fading

practices with the surge of the implementation of scripted curricula for struggling students, which in turn have impacted the quality of instruction and student learning.

### **Literacy Instruction**

Based on data from interviews and the literature review, students with complex communication needs require comprehensive literacy instruction in the primary areas of reading. Experts in the field call for a balanced approach to literacy instruction using four fundamental approaches: Guided reading, self-selected reading, writing, and working with words (Koppenhaver & Erickson, 2007). In addition, practicing whole group instruction should also occur. Integration and modeling of the universal core words across classroom activities are recommendation for beginning communicators. Literacy is a springboard for facilitating communication as language and literacy skills often develop in tandem for students with significant intellectual disabilities. Communication opportunities should be embedded throughout daily and academic routines. Lesson planning, teacher self-reflection, and interprofessional collaboration are integral components to the successful implementation of communication and literacy strategies (Erickson, 2017).

Classroom observations and interviews from Delaware educators provide data related to literacy practices currently implemented in classrooms serving students with complex communication needs. Data from classroom observations indicated that some level of literacy instruction is occurring in classrooms, however, the integration of core vocabulary was only evidenced in one of three classrooms. Instruction

covering multiple literacy skills was evidenced in all three classrooms; however, instruction did not appear to be comprehensive. All three classrooms used small group and one-on-one instruction. Teachers also used rotating stations to teach multiple literacy skills. Whole group instruction was not evidenced in any of the classrooms. Literacy skill instruction on comprehension, sight word recognition, letter ID and vocabulary was evidenced, however storybook reading, writing, and phonemic awareness was not evidenced during classroom observations. Implementation of AAC strategies as well as strategies acknowledging and facilitating communication were also areas not clearly evidenced. Embedding literacy skills throughout the school day was also an area not evidenced during classroom observations. In terms of the frequency of literacy instruction, one of three participants reported implementing literacy instruction daily, broken up throughout the day. The remaining participants reported that literacy instruction was taught 4 days a week for a 30 to 45-minute block.

Delaware study participants all reported a need for professional development opportunities related to literacy instruction and only 1 of 12 participants reported any district or state PD offering on literacy.

Data from focus groups and interviews supported the need to reevaluate the professional learning opportunities provided by SPEACS. According to Guskey (2003), effective teacher professional development begins with providing educators with active and authentic job-embedded opportunities to learn to use a practice and engage in self-reflection. Data from the document review, interviews, and focus groups indicated that self-reflection was not a strategy regularly practiced by SPEACS

participants. Additional key components of effective professional development identified by Guskey are creating an environment that fosters open communication and one where educators feel they can experiment and take risks in the classrooms. This notion of trust came up during the focus group multiple times. Participants shared the need for classroom teachers to feel a sense of camaraderie from SPEACS staff. Participants felt that the development of lessons and materials should occur collaboratively and that it was important for teachers to feel like they were not alone in this work. Other tenets of effective professional development are tapping into internal expertise of the school or program and collaboration. SPEACS is a collaborative approach that values the importance of involving all individuals who support the SPEACS focus student. Every participant is a valued team member that has a key role in the implementation of the SPEACS framework. Data from interviews and focus groups indicate a lack of collaboration among team members. Several participants stated that data collection related to the student's communication target often fell on one team member. One participant stated "classroom staff is willing to take data on other goals, but when it comes to goals related to communication it does not happen".

In terms of the application of Weiss's Theory of Change, evaluation of the current SPEACS framework was conducted by developing a logic model that broke the framework into the following components: inputs, processes, and outcomes. Weiss (1995) argued that programs are difficult to evaluate because their basis is on poorly articulated assumptions and because of this it is necessary to map out the mini-steps that lead to long-term outcomes (Msila & Setlhako, 2013). One primary tenet of

Weiss's Theory of Change is the need for programs to create a roadmap for change that illustrates the routes to achieving progress. This roadmap is a logic model. I created a logic model representing the SPEACS framework and focused and reflected primarily on the processes and outcomes. I looked for causal relationships between these two components and asked myself "Do these processes lead to the desired outcomes"? This analysis quickly uncovered the following underlying assumptions: participation in professional learning opportunities will lead to an increase in knowledge of school teams and an expansion of AAC practices. Another assumption that surfaced was that participation in coaching sessions would lead to an increase in school staff collaboration. The final assumption was that teams would make data-based decisions because of the SPEACS requirement to submit data on a monthly basis related to their student's communication target. These processes do not take into consideration potential barriers to implementation such as mindset, willingness, and quality of professional learning opportunities, efficacy of coaching, administrative support, and learner variability to name a few.

## **Limitations**

Before continuing to recommendations, it is important to acknowledge a few limitations to this study. One of them was the small number of focus groups conducted by the researcher. It was my hope to conduct a minimum of three, with one specific to parents. Interview served as a reasonable alternative. This leads to the next limitation, which is the limited number of parent perspectives evidenced in this study.

Another limiting factor was limited access to conduct observation in identified model programs. Observations of classrooms implementing evidence-based literacy activities would have provided me with a more in-depth view of what these practices look like in action. However, there are a limited number of model programs implementing comprehensive literacy instruction for students with complex communication needs.

Another limitation was my role in this study. As the ACCESS Project Program Manager and my earlier position as SPEACS Project Coordinator, I am deeply invested in this work. To minimize bias, I conducted member checks and peer debriefing.



## **Chapter 6**

### **RECOMMENDATIONS**

The final question of this study was: How can literacy instruction be incorporated within the SPEACS framework to promote sustainability of evidence-based practices? Through this study, a number of factors surfaced that could be potential influences impacting the sustainability of the SPEACS framework. These included lack of quality professional learning opportunities, lack of collaboration among school team members, lack of student opportunity, and lack of knowledge of literacy and AAC practices.

#### **Professional Learning**

The first recommendation is to expand the professional learning opportunities provided by SPEACS. Expansion in both the delivery method as well as the range of topics covered is necessary. Focus group and interview participants reported that districts and programs have not offered professional development opportunities within the areas of literacy instruction and AAC. In addition, participants reported that "one and done workshops" are not effective and that school staff needs follow-up that consists of SPEACS staff modeling practices and processes. Based on Guskey's Five Critical Levels of Professional Development (Guskey, 2003), participants raised concerns about the professional learning provided by SPEACS that aligns to Guskey's Level 1: Participants' Reactions and Level 2: Participants' Learning. These are fundamental issues that need addressing for SPEACS to have a greater impact.

Addressing this need is in the Revised SPEACS Sustainability Logic Model (See Appendix G). Modeling of instructional strategies in the areas of literacy instruction and AAC will provide school staff with more personalized professional development that provides opportunities for educators to adapt practices to their classroom situations (Guskey & Yoon, 2009). Utilizing additional professional development delivery methods such as distance learning, consisting of online learning opportunities, will provide participants with a convenient way to access content in digestible chunks.

### **Collaboration**

Even though SPEACS is a collaborative and team-based approach, focus group and interview participants indicated that team members are still working in isolation. Focus group participants reported that the responsibility of data collection often falls on one person. Interview participants reported that many related service providers are often providing pullout services to students. The participants also reported lack of collaborative planning time. SPEACS encourages the collaboration of all professionals as well as parents in the process. However, data indicated that team members are still working in isolation. In order to have a greater impact on student outcomes, it is vital for teams to collaborate regularly, determine goals jointly, and share information for documenting student outcomes. Teams must also embrace the notion that parents are members of the school team. There is also a need for SPEACS to collaborate with community members. This is a component that is key to SPEACS

sustainability. One way for SPEACS to focus more on building collaboration is for the SPEACS team to build their knowledge of Interprofessional collaborative practices and begin thinking about how to integrate these practices into the framework. This component is now evidenced as part of the SPEACS processes in the revised logic model.

### **Lack of Student Opportunity**

One of the greatest barriers to SPEACS sustainability is the lack of opportunity provided to students to use AAC, communicate, and engage in meaningful literacy activities. There is still this notion that individuals with complex communication needs must meet certain prerequisites before being given opportunities and a symbolic means to communicate. This thinking was evidenced during the focus group and interviews. One participant reported that “the SPEACS team was moving forward too fast when the student was not ready, the student was still working on discrimination skills”. Despite the professional development opportunities provided, the multiple statements made about communication being a fundamental right, and the student success stories shared, these beliefs are still prevalent. How do we change this mindset? For starters, the SPEACS application process must change. For the last six years, SPEACS has worked with school teams up and down the state, but most teams work as though they are on an island within their own schools and programs. For change to take place, more success stories need sharing and people often need to experience the benefit and power of a practice before they buy-in to it. Focusing on

one school or program would provide us with an opportunity to center our work on changing professional practices. SPEACS needs to change the application process from individual student teams to school or district applications. This is one of the changes to the revised logic model.

### **Literacy and AAC**

The final recommendation relates to the need for professional development in literacy and AAC. Focus group and interview participants were asked about what AAC meant to them. Most participants rattled off the names of familiar devices used within their districts and programs. None of the participants mentioned strategies or other types of supports that are part of AAC. This showed the varying views that professionals have regarding AAC. Focus group participants also mentioned the difficulty of finding Speech-Language Pathologists (SLP) who demonstrates expertise in AAC to work in their schools and programs. This shortage of SLPs with competencies in AAC is a national issue. One way to address this issue is to provide accessible in-depth professional learning opportunities that address specific components of literacy instruction and AAC. One way to increase accessibility is to expand SPEACS professional learning opportunities through the integration of Penn State's AAC Learning Center into the framework. These courses are free to the public and consist of short online modules available for blending into any program. Courses cover content related to funding AAC, alternative access, literacy, family-centered practices, and transition (see Revised Logic Model in Appendix G).

The lack of knowledge related to AAC and literacy instruction across stakeholders, as well as the lack of professional development on this topic has a significant impact on sustainability. The lack of PD opportunities around literacy practices for educators working with students with complex communication needs in Delaware are cause for concern. This lack of knowledge and opportunity is also a lack of engagement. This disengagement can be evidenced at multiple levels within our system (school, program, state, higher education-pre-service preparation programs) and has far-reaching implications for individuals with significant cognitive disabilities.

"You Don't Know What You Don't Know Until You Know It" is an expression made by one of the focus group participants that truly exemplifies the importance of challenging assumptions made about knowledge and the importance of self-reflection. Knowledge continues to grow and evolve, but when complacency sets in, other perspectives and sources of knowledge are shut out. Knowledge expansion is part of professional learning. One of the biggest barriers to professional learning is a complacent mindset.

The integration of evidence-based literacy practices can be seamlessly integrated into the SPEACS framework. The addition of literacy would only enhance the initiative. The added component of literacy would provide educators with a context for facilitating communication and would provide opportunities for students to communicate for a variety of purposes that extends beyond basic wants and needs. AAC, communication, and literacy are inextricably linked. This connectedness allows for the integration into the SPEACS initiative and it is my hope that with this addition,

communication and literacy outcomes improve for students with complex communication needs attending Delaware schools.

### **Recommendations for Future Study**

Results of this study yielded several implications for future research. Parent involvement in the facilitation of AAC and literacy practices is one area that needs further investigation. Parent engagement was a question posed to research participants. Participants discussed the many strategies employed to foster parent participation, but engagement proved to be short-lived. Parent engagement is a critical part of AAC intervention and finding strategies to increase their participation in the process is key.

In addition to parent engagement, another topic requiring further research is the impact that Delaware's recent collaboration with Dynamic Learning Map (DLM) Consortium could potentially have on literacy instruction for students with significant intellectual disabilities participating in the alternate assessment. Delaware joined the DLM consortium in the 2017-18 school year. In addition to the assessment, DLM also provides educators with instructional resources to assist with instructional implementation in English language arts, math, and science.

Another issue needing further exploration is the courses of study for teacher pre-service preparation programs. The focus group and interviews raised questions regarding barriers to the implementation of literacy instruction. Programs preparing teachers to work with students with significant cognitive disabilities often mandate

courses that have a behavioral focus as opposed to one that addresses an academic curriculum. Teachers are exiting programs feeling ill-equipped to teach students with significant cognitive needs academic skills such as reading and writing.

This is just another reminder about the importance of engaging all stakeholders in these critical issues. To challenge our current thinking, we have to be willing to consider multiple perspectives in order to learn more.

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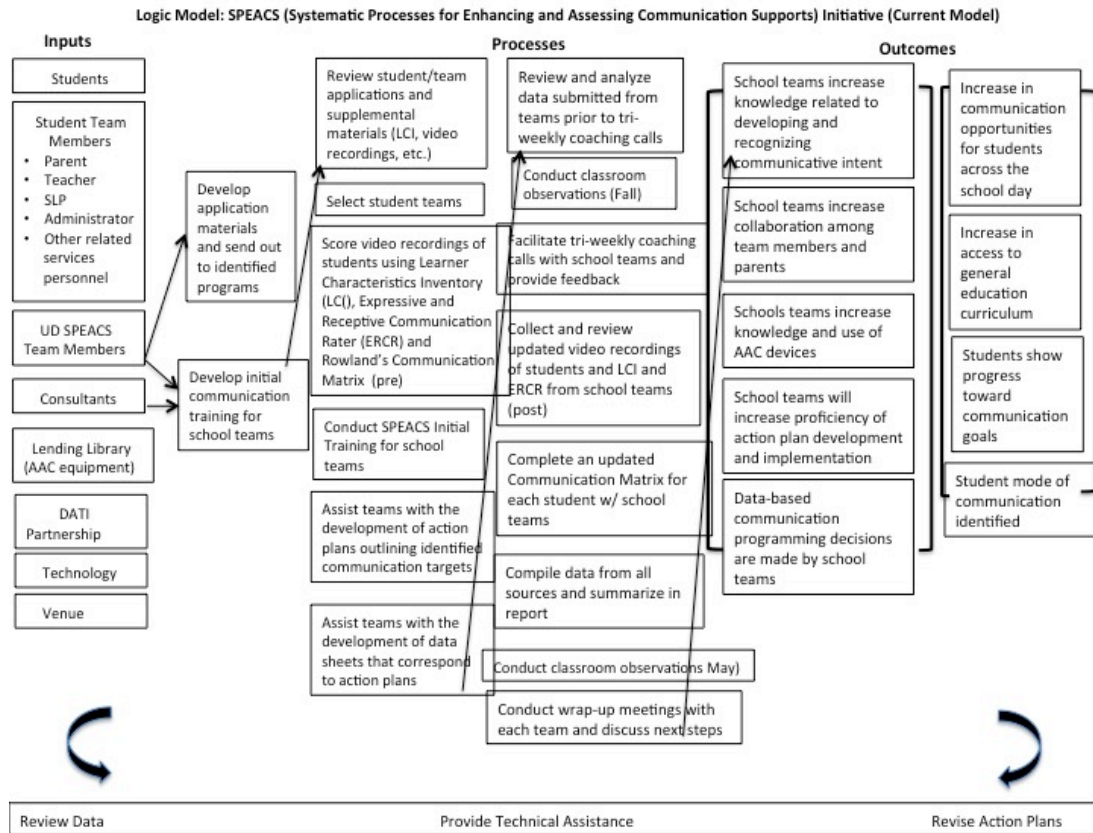
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# Appendix A

## LOGIC MODEL



## **Appendix B**

### **FOCUS GROUP/INTERVIEW PROTOCOL (SPEACS)**

#### Complex Communication Needs and AAC

1. What does Augmentative and Alternative Communication mean to you?
2. What background do you have in working with students with complex communication needs using Augmentative and Alternative Communication (AAC)?
3. What do you feel are some of the most pressing priorities for these students?
4. Do you currently work with students using Alternative and Augmentative Communication (AAC)? If so, what types of AAC are being used?
5. Has the professional development and technical assistance associated with the SPEACS Initiative affected communication programming for your student(s)? How has participation impacted your own practice?
  - What areas of programming/practice have been affected?
  -

#### Literacy Instruction

6. What does literacy instruction look like in your classroom?
7. What types of programs, interventions, and practices are you using to teach literacy skills?
  - What practices do you think are most effective in teaching students with complex communication needs?
8. How does literacy instruction look for students who do not use speech as their primary mode of communication?
  -
9. How do you assess your students' literacy skills?
  - Which assessments are you currently using?
  - Are your students using emergent or conventional literacy?
10. What literacy skills are you targeting in instruction?
  - For reading and writing?

11. What types of professional development have you received related to literacy instruction within the last five years?
12. Has the recent change in the alternate assessment impacted literacy practices implemented in your classroom? If so, how?
13. What do you think is needed to support Delaware educators in implementing literacy instruction for students with significant cognitive disabilities?
14. How can we make conventional literacy a reality for these students?

## **Appendix C**

### **FOCUS GROUP/ INTERVIEW PROTOCOL (LITERACY PROGRAMS/CLASSROOMS)**

#### Complex Communication Needs and AAC

1. What does Augmentative and Alternative Communication mean to you?
  - What does it encompass?
2. What background do you have in working with students with complex communication needs using Augmentative and Alternative Communication (AAC)?
3. Do you currently work with students using Alternative and Augmentative Communication (AAC)? In what capacity?
  - If so, what types of AAC are being used?

#### Literacy Instruction

4. What does literacy instruction look like in your classroom/schools?
5. What types of programs, interventions, and practices are you using to teach literacy skills?
  - What practices do you think are most effective in teaching students with complex communication needs?
6. How does literacy instruction look for students who do not use speech as their primary mode of communication?
  - What types of adaptations do you make in order to make it accessible to your students?
7. What literacy skills are you targeting in instruction?
  - For reading and writing?
8. What types of professional development have you attended or offered to educators related to literacy instruction for students with significant cognitive needs?
9. What does planning for literacy instruction look like?
  - How much time does it entail?



10. Is literacy integrated across other academic/non-academic areas of the school day?
11. Do you collaborate with content specialists and other related service providers?
  - If so, how often do you meet?
  - Is this planning time built into your schedule?
12. What supports have been instrumental in supporting educators with the successful implementation of literacy instruction for students with significant cognitive disabilities in your school/program/district/state?
13. How do parents of students in your program/class support literacy at home?
  - How do you get them involved?
  - Do you have initiatives specifically aimed at providing parents with strategies, tools, and resources to support literacy?
  - In general, do parents view literacy as a priority? If not, how do you get them on board?

## Appendix D

### OBSERVATION RUBRIC (UD)

Teacher Observation Rubric

Student: \_\_\_\_\_ School/Program: \_\_\_\_\_  
 Observer: \_\_\_\_\_ Date of Observation: \_\_\_\_\_

Component	0 – No evidence	1 – Some evidence	2 – Clear evidence	Notes
Instruction targets multiple skills within the 5 areas of reading instruction: phonemic awareness, phonics, vocabulary, fluency and comprehension				
Reading materials are adapted to meet the student needs and support participation				
Instruction is applied in meaningful ways and literacy skills are embedded across multiple contexts				
During instruction connections are made to students personal experiences				

Teacher Observation Rubric

Component	0 – No evidence	1 – Some evidence	2 – Clear evidence	Notes
Age-appropriate materials are being used for instruction				
Materials are used to sustain the interest of students				
Research based instructional strategies are implemented during literacy instruction (guided practice, systematic instruction, prompt hierarchy, wait time, etc.)				
Lessons are accessible, promote meaningful participation and communication				
Literacy instruction occurs daily and students receive a minimum of 30 minutes of instruction per day				
AAC strategies are being implemented with consistency for students with complex communication needs				

## Appendix E

### SELF-REFLECTION OBSERVATION RUBRIC (PROJECT-CORE/ UNC)



#### Project Core

A Stepping-up Technology Implementation Grant  
Directed by the Center for Literacy and Disability Studies at UNC Chapel Hill

#### PROJECT CORE SELF-REFLECTION & OBSERVATION

Teacher: \_\_\_\_\_ Other Adults: \_\_\_\_\_ # of Students: \_\_\_\_\_  
 Activity: ☐ Academic ☐ Non-academic Brief Description of Activity: \_\_\_\_\_  
 Date: \_\_\_\_\_ Time: \_\_\_\_\_ Observer: \_\_\_\_\_

**Directions:** Observe all adults and all students for whom AAC is appropriate. *Consistently* means most of the students most of the time; *Occasionally* means some of the students some of the time; *Never* means not a single instance for any of the students.

Evidence	Consistently	Occasionally	Never	Comments & Examples
ALL students have an individual communication system that meets their access needs (e.g., 4-inline Universal Core).				
Adults recognize and respond to student's efforts to communicate (e.g., "I see you smiling.")				
Adults expand on student's efforts to communicate using more conventional means (e.g., "I see you reaching. Do you WANT it?" Or, "DIFFERENT. Does that LOOK DIFFERENT?")				
Adults model core vocabulary using communication systems that are similar to the students' individual core vocabulary systems.				
Adults routinely invite, without requiring, students to use their core vocabulary system.				
Adults provide adequate time for students to initiate and respond.				
When appropriate for shared orientation, classroom size core vocabulary supports are used during group instruction.				
Students are encouraged to initiate using symbolic behaviors (speech, sign, symbols)				<input type="checkbox"/> Students use a core vocabulary system
Students are encouraged to initiate using non-symbolic behaviors used with communicative intent (gestures, vocalizations).				
Students are encouraged to respond using symbolic behaviors (speech, sign, symbols)				<input type="checkbox"/> Students use a core vocabulary system
Students are encouraged to respond using non-symbolic behaviors used with communicative intent (gestures, vocalizations).				

Summary and Additional Comments (continue on back as needed):

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draft date: 09/21/17

## Appendix F

### IRB APPROVAL



RESEARCH OFFICE

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DATE: April 11, 2018

TO: Esley Newton, M.Ed  
FROM: University of Delaware IRB

STUDY TITLE: [1201191-1] Promoting Sustainability Through the Integration of Literacy Instruction into the Systematic Processes for Enhancing and Assessing Communication Supports

SUBMISSION TYPE: New Project

ACTION: DETERMINATION OF EXEMPT STATUS  
DECISION DATE: April 11, 2018

REVIEW CATEGORY: Exemption category # (2)

Thank you for your submission of New Project materials for this research study. The University of Delaware IRB has determined this project is EXEMPT FROM IRB REVIEW according to federal regulations.

We will put a copy of this correspondence on file in our office. Please remember to notify us if you make any substantial changes to the project.

If you have any questions, please contact Nicole Farnese-McFarlane at (302) 831-1119 or [nicolefm@udel.edu](mailto:nicolefm@udel.edu). Please include your study title and reference number in all correspondence with this office.

## Appendix G

### REVISED LOGIC MODEL (SUSTAINABILITY)

