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Conflict Resolution Behaviors and the Affect of Identity Standards and Empowerment
Needs on Individuals Using External Augmentative and Alternative Communication
Devices

by

Amy Ross Parker

A Dissertation Presented to the
College of Arts, Humanities, and Social Sciences of Nova Southeastern University
in Partial Fulfillment of the Requirements for the Degree of
Doctor of Philosophy

Nova Southeastern University
2016

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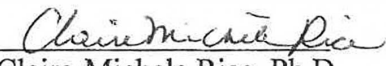
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This dissertation was submitted by Amy Parker under the direction of the chair of the dissertation committee listed below. It was submitted to the College of Arts, Humanities, and Social Sciences and approved in partial fulfillment for the degree of Doctor of Philosophy in Conflict Analysis and Resolution at Nova Southeastern University.

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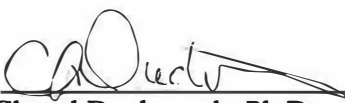
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Dedication

This dissertation is dedicated to my encouraging, reassuring husband, Jeff, our passionate, insightful daughter, Shaelyn, our witty, caring son, Cameron, and our spirited, charismatic daughter, Bridget. Your unyielding support has allowed me to travel this challenging, unpredictable, and seemingly endless road. Finally, I also dedicate this work to my greatest fan, my uncle, Kenneth Clark. I know you are proudly smiling down from above.

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List of Abbreviations

AAC	Augmentative and alternative communication
ASD	Autism Spectrum Disorder
CB	Communicative burden
CI	Communication impaired/communication impairment
CP	Cerebral palsy
IPA	Interpretive phenomenological analysis
NL	Normal language
PI	Primary investigator
SCA	Supported conversation approach
SGD	Speech generating device
SLI	Specific language impairment
SMG	Spinal Muscular Atrophy
VOCA	Voice-output-communication aid

Abstract

Individuals with communication impairments (CI) are at a distinct disadvantage when attempting to interact through more traditional conversational means. Although their intentions may be similar to peers, physical limitations make verbal articulation of thoughts and feelings a more laborious undertaking. For some, the use of external augmentative and alternative communication (AAC) has offered an otherwise unavailable communicative opportunity. However, this type of communication requires more of the non-AAC using conversation partner and, unlike traditional forms of communication, may increase the likelihood of miscommunication. Although there is agreement as to the importance of understanding the experience of individuals using external AAC, there is limited research in the area of miscommunication, conflict, and conflict resolution. This phenomenological study explored the experiences of six individuals who use external AAC devices. The purpose of this study was to address the following research questions: 1) What are the conflict behaviors, beliefs, values, or thoughts of individuals using external AAC devices? 2) Does miscommunication between AAC and non-AAC users contribute to conflict? 3) Do identity standards and empowerment needs contribute to the development of conflict? and 4) For those using external AAC devices, what is the impact of, and what do successful resolutions mean? This study finds similarities in the interpersonal conflict experience of external AAC users and non-users. However there were differences in their experience with larger societal-level conflict. Understanding these areas of similarity and difference is beneficial to anyone who endeavors to support the interpersonal and societal level conflict resolution of this unique population.

Chapter 1: Introduction/Background

Introduction

The efficacy of verbal communication in the communication impaired (CI) population is limited due to a variety of physical circumstances. These are often the result of medical issues such as cerebral palsy (CP) or Parkinson's disease (Koman, Smith & Shilt, 2004), traumatic brain injury and stroke (Carlsson, Paterson, Scott-Findlay, Ehnfors & Ehrenberg, 2007), or neurological conditions such as Autism Spectrum Disorder (ASD) (Siegler, 2010; Keen, Sigafos & Wyatt, 2005). Conditions such as the aforementioned diagnoses may result in problems such as aphasia, apraxia, dysarthria, or dysprosody, all of which effect oral motor ability and motor planning. The motor issues created by these conditions impact the physical production of language. CI individuals may experience dysfluency or sound production problems and in severe cases, those with communication impairment are entirely non-verbal.

Language developed from a need to communicate beyond simple gestural exchanges between individuals (Sandberg & Liliedahl, 2008). Even young children, who have yet to develop that ability to verbally communicate, demonstrate a desire to interact with the world around them (Murray & Trevarthen, 1986; Bateson, 1975). Philosophers such a Socrates, Cicero, and Lucretius suggested language developed much like a tool and often refer to it as such (Hewes, 1993). Socrates described the "loom of language" while Cicero identified words as "notes of things" (Hewes, 1993, p.21). Titus Lucretius Carus characterized the development of language as an integral piece in the movement of ancient man from primitive to civilized. Of this he stated, "as for the various sounds of spoken language, it was nature that drove men to utter these, and practical convenience

that gave the form to the names of objects” (Hewes, 1993, p.21). Through symbolic reasoning, humans could use words to describe situations allowing others to understand conditions without having to experience them directly. This was critically important to our ancient ancestors. Of this Medina (2014) said, “Our evolutionary ancestors didn’t have to keep falling into the same quicksand pit if they could tell others about it; even better if they learned to put up warning signs” (p 7).

Different areas of the brain are responsible for the storage of grammatical concepts, words, and letters. All are critical pieces of language processing. In bilingual individuals, the components for each language are housed in different areas of the brain. Interestingly, these areas are different in each person due to the unique wiring of each individual brain.

German-American anthropologist Franz Boas detailed a condition whereby one’s worldview is shaped by the symbolism and conceptual categorization defined within their spoken language. Boas, and later his student Edward Sapir, and Sapir’s colleague, Benjamin Whorf, developed the hypothesis of linguistic relativity (Burke, 2006). This is the notion that thought is directly influenced by language and those speaking different languages will interpret and experience the world differently (Lucy, 1992). Tannen suggested language patterns are also affected by environmental factors including: “individual personality, profession, social class, age, ethnicity, and birth order” (as cited in Medina, 2014, p. 237).

Psychologist Madeline Levine (2006) indicated in a young child, language has a significant impact on the development of the self. Of this she said, “Language gives young children the ability to label and begin to define themselves. ‘Good boy,’ repeats

the two-year-old after hearing it for the millionth time. He can begin to hang his embryonic self-concept on this simple phrase” (p.100). In addition to the formulation of identity, language combined with memory, empowers children with a method to combat feelings of anger or fear. A child fearful of separation from his or her mother may verbalize the understanding that when mommy leaves, she comes back (Levine, 2006).

The production of verbal language requires the careful coordination of a variety of mental and physical processes. Patel and Campellone (2009) described this confluence of events as prosody: “Prosody is a multifaceted aspect of the speech signal on which speakers and listeners must rely to accurately transfer information” (p. 206). The speaker creates a message that serves a purpose. In order to accurately transmit this message, the speaker must coordinate grammatical and syntactical accuracy, adjust fluency and intonation, and consider social and psychological frames (Tannen, 1990) and semantics (Patel & Campellone, 2009; Siegler, 2007). It is for these reasons that without a contextual backdrop, words spoken in isolation have limited meaning (Hustad, 2007).

This communicative process is further complicated by the cooperative role of the listener (McCormack, McLeod, McAllister, & Harrison, 2010; Simmons-Mackey et al., 2004; Tannock & Girolametto, 1992). Simmons-Mackie and associates (2004) described this process as framing and footing. Framing assigns roles within the exchange (Tannen, 1990) while footing describes the speaker’s position in order to encourage the recipient’s participation (Simmons-Mackie et al., 2004). The entire exchange is called a participation framework (Tannen, 1990) and includes not only the speaker and listener, but also the context of the exchange (Simmons-Mackie et al., 2004).

Conditions such as aphasia and dysarthria adversely affect the ability of a speaker to verbally convey messages. Aphasia is a condition whereby damage to the language centers of the brain impact any or all of the following: speaking, listening, reading, and writing (ASHA, 2014). Some individuals struggle to verbalize thoughts and feelings (expressive aphasia), while others have difficulty understanding the verbalizations of others (receptive aphasia). Those with global aphasia have difficulty with expressive and receptive language (ASHA, 2014). Unlike aphasia, dysarthria is specifically a motor speech disorder. Dysarthria may be caused by a stroke or traumatic brain injury, or conditions such as cerebral palsy or muscular dystrophy (ASHA, 2014). Regardless of presentation or diagnosis, the desire to communicate often remains intact in spite of accompanying communicative challenges (Light, 1988). Since conversation between individuals is purposeful (Ferm, Ahlsén, & Björck-Åkesson, 2005) any difficulty with communicative participation due to communication impairment creates an unequal conversational relationship (Anward, 2002).

Conversations under these conditions require a different type of contribution from the non-CI participant (Pennington et al., 2009; Siegler, 2007; Keen et al.; Simmons-Mackie et al., 2004; Anward, 2002; McCormack et al., 1997; Tannock & Girolametto, 1992). When the speaker is a CI individual, successful communication requires the listener make more adjustments for and observations of behavior than are necessary when corresponding with a non-CI individual (Pennington et al., 2009; Keen et al., 2005; McCormack et al., 1997). Those with CI provide less signal-dependent (Hustad et al., 2003; Lindblom, 1990) information. Signal-dependent information is that which relies upon the acoustic and phonetic signals found in speech (Keintz, Bunton, & Hoit, 2007).

To demonstrate this concept, Keintz and associates (2007) examined the impact of visual information on speech intelligibility. Speech intelligibility is defined as: “the amount of speech understood by acoustic signal alone” (p. 223). Eight individuals afflicted with Parkinson’s disease and dysarthria were asked to read sentences that were subsequently transcribed by twenty listeners. Listeners first audited recordings and then observed video recordings of participants reading the sentences. This study found that auditory-visual scores were much higher than auditory only scores. This finding suggests that clinicians should consider treatment options that include auditory-visual measures when assessing the intelligibility of Parkinson’s speakers. For those communicating with a CI individual, a full understanding of the intended message requires non-CI conversation participants observe body language. These are signal-independent behaviors (Keintz et al., 2007) such as gaze, body movement, and gesture (Keen et al., 2005; Pennington et al., 2009). However, even these behaviors may present differently when one is communication impaired. Due to motor issues, facial expressions, and other non-verbal behaviors may be impacted (Anderson, Baladin, & Clendon, 2011).

To ensure accurate understanding, non-CI speech partners must slow communication and provide additional response time for their CI conversation partner (Tannock & Girolametto, 1992). This can often be difficult. Sandberg and Liliedahl (2009) found in parent/child interaction, parents of CI children often attempted to rescue the conversation by becoming more active in the exchange. However, this increased involvement often prevented parents from providing the child additional response time. Further, the difficulties CI individuals experience when attempting to communicate create significant stress (Laures-Gore, DuBay, Duff, & Buchanan, 2010; McCormack et

al., 1997) and often, those with CI possess diminished coping skills (Laures-Gore, Hamilton, & Methany, as cited in Laures-Gore et al., 2010; McCormack et al., 1997).

For some, CI has no comorbidity with learning or cognitive disability (Love, 1992). In these cases motor speech disability presents as a speech impairment of the motor control centers in the peripheral and/or central nervous systems of the brain (Love, 1992). These individuals are unable to physically produce sounds despite the desire to do so. This is often found in conditions such as cerebral palsy, stroke, traumatic brain injury, or Parkinson's disease where individuals may have additional feeding difficulties and/or generalized paralysis (Love, 1992). While speech production may not be possible, the understanding of speech or receptive language remains intact.

Through the use of external alternative and augmentative communication (AAC) systems, those with motor speech disability are able to “verbally” communicate using an external device. The increased availability of more portable electronic devices such as iPads, iPods, and iPhones has not only increased the ability of CI individuals to verbally interact with the world around them, but has likewise increased the social acceptance of AAC (McNaughton & Light, 2013). Although focused intervention will increase their ability to independently communicate (Beukelman and Mirenda, 2013), the needs of individuals with motor speech disability are diverse and researchers and therapists have only begun to scratch the surface in terms of assessing and understanding their technological necessities. In addition to increased intelligibility of speech, several quality of life areas may be improved through access to AAC. These include education, employment, reporting of criminal behavior or abuse (Bornman & Bryen, 2013), as well as face-to-face interaction, and social relationships. Katz, Lawyer, and Sweedler (2010)

suggest: “The goal of effective communication is to ensure that the impact of your communication on another really corresponds with your original intention and that the impact of another’s message on you corresponds with the other’s intention” (p. 11).

This is especially important when engaging in conflict resolution. Pruitt and Kim (2004) outlined four basic conflict strategies: contending, yielding, problem solving, and avoiding. They suggest contending, yielding, and problem solving are active strategies in that participants engage in some form of conflict resolution. Frequently this interaction is in the form of spoken or expressive language. Unlike communication between individuals who do not use external AAC devices, communication between AAC and non-AAC users is largely asymmetrical in that additional responsibility is placed on the non-AAC using conversation partner.

A study by Marshall and colleagues (1997) assessed the degree of communicative burden (CB) placed on non-CI individuals. In this work, researchers examined the communication styles of aphasic patients and the subsequent impact on message transfer. One participant communicated through halted speech, another through pictures and writing, and a third through gestures. Raters in this study suggested the participant who attempted verbal conversation was the most difficult to understand. According to the authors: “Raters complained that it was difficult for MD to complete a message and that this restricted his transfer of information” (Marshall et al., 1997, p. 381). In addition to the “frames” previously described by Simmons-Mackey and associates (2004), communication with CI individuals must also include repair sequences. In these sequences, the non-CI listener endeavors to correct misunderstandings related to the message of the CI speaker.

Individuals without communication impairments take on additional responsibility for the accurate transfer of information. Non-traditional forms of communication such as AAC offer additional opportunity for communication; however, the opportunity for misunderstanding remains constant. Communication under these conditions requires more of the non-AAC user and may change the dynamic that exists when actors (one AAC user and one non-AAC user) communicate. Thus, the manner in which conflict develops as well as how communication partners work through interpersonal conflict is of considerable interest.

Background

This phenomenology examined the experience of individuals using external AAC devices. Specifically, it sought to identify conflict resolution behaviors, beliefs, values or thoughts of external AAC users; assess whether miscommunication between external AAC users and non-AAC users contributes to conflict; determine whether identity standards and empowerment needs contribute to the development of conflict or impact conflict resolution; and understand the meaning of conflict resolution to individuals using external AAC devices. Even though a significant component of this communication is the role of the communication partner, this study focused primarily on the experiences of those who use external AAC devices.

Communication differences between the actors create different social identities. Thus, the exploration of the conflict extends beyond the presenting problem to the core identities of the disputants and the impact of these beliefs on communication. Stone, Patton, and Heen (1999) offered three common identity issues:

1. Am I competent?

2. Am I a good person?
3. Am I worthy of love? (p. 113)

When in conflict, our identity may be called into question causing confusion between who we see ourselves to be and how others see us. Stone and colleagues (1999) called this disruption an “identity quake” (p. 114). These quakes cause physiological disturbances that may increase miscommunication. Of this Stone and associates (1999) indicated:

Getting knocked off balance can even cause you to react physically in ways that make the conversation go from difficult to impossible. Images of yourself or of the future are hardwired to your adrenal response, and shaking them up can cause an unmanageable rush of anxiety or anger, or an intense desire to get away. Well-being is replaced with depression, hope with hopelessness, efficacy with fear. And all the while you’re trying to engage in the extremely delicate task of communicating clearly and effectively. (p. 114)

Thus, miscommunication resulting in conflict may be the result of identity processes impacting one’s perception of the “self,” as well as attribution processes impacting one’s perception of “other.”

Attribution processes effect one’s perception of the origin of the behavior of the other and in turn their response to the perceived behavior (Pruitt & Kim, 2004; Folger, Poole & Stutman, 2001; Harman, 1999; Ross & Nisbett, 1991; Nisbett & Ross, 1980). This impacts communication in that one makes assumptions about the character of the other, their motivations, and in some cases, a judgmental analysis of both behavior and motivation. All of these assumptions can occur during the course of a single

communicative exchange. This is based on both *dispositional* and *situational factors*. Dispositional factors refer to the aspects of a person's character and are often considered innate while situational factors refer to an external situation to which one responds. People frequently view their own behavior as situational and the behavior of others as dispositional. In other words, one believes their behavior is the result of external factors that may have provoked or prevented certain responses, as opposed to the behavior of the other, which is attributed to character flaws or malevolent intentions.

In other individuals, we frequently use perceived character traits to help explain behavior (Harman, 1999). Pruitt and Kim (2004) suggested dispositional causes often support one's hypothesis of the other while information that contradicts this hypothesis is situational. Attribution errors can occur when people are quite familiar with one another, but are more frequent when one person or party has limited knowledge of the other. Further, once established, there is little one can do to quell unfavorable expectations (Pruitt & Kim, 2004). Nisbett and Ross (1980) described this as information bias. One seeks information to confirm a belief and will ignore evidence to the contrary. The initial cause of the fundamental attribution error may have to do with paying more attention to the actor and less to the situation (Ross & Nisbett, 1991).

Some theorists suggest meaning is differential rather than referential. This describes the lack of a specific concept that has universal meaning. Rather the meaning is derived, at least in part, from its relationship to another idea (Campbell, 2011). When one has the ability to communicate verbally and one cannot, the intent of the message and the meaning ascribed to the message may be incongruent. Much like the elementary school

game of telephone, the intended message may or may not remain intact once it has moved to the end of the chain.

Katz and associates (2010) outlined representational systems or codes through which we analyze, interpret, and behave. Thus it is the meaning taken from the communication that will be acted upon, whether or not the message received is the one that was intended. It is important to understand different representational systems to understand the message within communication. It is this piece that is critical when examining miscommunication and the development of conflict between typical communicators and those using external AAC.

Identity describes the role/roles one occupies individually, within a group, and as part of society. One's identity may include various roles such as wife, daughter, sister, student, or professional. It may also include the behaviors attributed to these roles and the meanings that we have ascribed to them. According to Burke and Stets (2009):

Identity theory seeks to explain the specific meanings that individuals have for the multiple identities they claim; how these identities relate to one another for any one person; how their identities influence their behavior, thoughts, and feelings or emotions; and how their identities tie them in to society at large. (p.3)

Within identity theory, agents are not individuals. Rather, agents are the various identities possessed by an individual. According to identity theorists, it is these agents that require a variety of interaction systems in order for an individual to create the self (Burke & Stets, 2009). However, the self is developed in response to the reactions of others and in time, one sees him or herself in the same way he or she is seen by others (Burke, 1980). Thus, identity theory includes the main concepts of the self, language, and interaction. An

additional area of consideration is the individual's beliefs concerning locus of control and empowerment.

The term "empower" is defined as: "to give (someone) the authority or power to do something" (Oxford Dictionaries, 2014). The history of the construct of empowerment is unclear; however, it appears to have a connection to psychological theories of power and social movements of the 1960s (Dempsey & Foreman, 2006). The notion of empowerment came to prominence in the 1980s and served as a catalyst to changes in the delivery of social services for individuals with disabilities. Julian Rappaport, a significant contributor to the psychological construct, described empowerment as a choice between viewing those with disabilities as: "dependent persons to be helped, socialized, trained, given skills, and have their illnesses prevented or as citizens to be assured of rights and choices (Rappaport, 1981, p. 11). In addition to the potential to impact of AAC use on both language and interaction, likewise the influence of identity and empowerment beg further examination.

Research Questions and Purpose Statement

Successful social interaction incorporates many aspects of communication that revolve around language. This includes many of the processes that are used in conflict resolution such as active and reflective listening, questioning, and paraphrasing (Katz, Lawyer, & Sweedler, 2010; Tannen, 1990; Bolton, 1979). Individuals using an external AAC device may struggle to convey a purposeful message or demonstrate understanding regardless of the desire to do so. Without the cooperation of their communication partner, they have limited ability to expand upon their thoughts or clarify misconceptions. More importantly, they risk misunderstanding on the part of the non-AAC using peer. These

factors have a profound impact on the dispute resolution ability of individuals using external AAC devices. Although communication with individuals using external AAC devices is certainly possible, current research primarily focuses on socialization, intervention, and technology. No research was found that describes the conflict resolution experience of this population. This study sought to answer the following research questions:

1. What are the conflict resolution behaviors, beliefs, values or thoughts of external AAC users?
2. Does miscommunication between external AAC users and non-AAC users contributes to conflict?
3. Do identity standards and empowerment needs effect the development of conflict
4. For those using external AAC devices, what is the impact of conflict resolution and what do successful resolutions mean to an external AAC user?

Conclusion

Chapter 1 described language from historical, neurological, psychological, and physiological perspectives and connected language to interpersonal communication and human development. Both the causes of communication impairment as well as the impact of CI on social interaction were explored. Since language allows individuals to communicate more complex information not easily communicable through gesture alone, this chapter considered the impact of external language producing devices on the communicative action. Further, it examined the role of identity and empowerment on the

development and resolution of conflict. Finally this chapter outlined four research questions guiding this study.

Chapter 2 provides a more holistic examination of communicative language through an exploration of verbal and alternative and augmentative communication. It examines the role of language in the development and resolution of conflicts and considers the potential impact of external AAC on this process. The chapter begins with a brief overview of language in communication; explores the connection between language, identity and empowerment; describes the nature of communication impairment; explains alternative augmentative communication; and examines the role of typical language in the development and resolution of conflicts. Chapter 2 hypothesizes the use of external AAC devices influence the development of conflict and the conflict resolution process; however, the impact of such devices, and the additional affect of the identity standards and empowerment needs of external AAC users is the subject of investigation.

Chapter 2: Literature Review

Language in Communication

Bruner (1983) suggested that children use linguistic structures to “communicate needs, wishes, and intentions, and to conduct joint action with another” (p. 7). Even before young children are capable of speech, they present a desire to communicate with others (Bateson, 1975). Studies of infant behavior found infants will turn their heads toward the sound of their mother’s voice hours after birth (Fifer & Moon, 1995; Moon, Cooper, & Fifer, 1993; Spence & DeCasper, 1987; DeCasper & Spence, 1986). Not only does the sound of a mother’s voice produce a subsequent behavioral change, but Voegtline, Costigan, Pater, and DiPietro (2013) discovered an additional physiological change in the heart rate and movement of near-term fetuses.

Between nine and twelve months, infants communicate primarily through gestures. While these gestures are sometimes accompanied by words, gestures are used before language and are considered by some theorists, an important indicator in the movement toward language (Iverson & Goldin-Meadow, 2004). An additional work conducted by Cheour, Ceponiene, Lehtokoski, Luuk, Allik, Alho, and Näätänen (1998) demonstrated how environment impacts the manner in which infants perceive language. In this study, not only were infants capable of discriminating between phonemic differences, but they also showed an increased ability to distinguish between phonemes in the language they typically hear in comparison to an unfamiliar language.

Early childhood communication primarily consists of sounds and gestures that express the child’s wants or needs. Although this is not verbal language per se, it is purposeful and has meaning. According to Halliday (1975), learning to “mean” requires

the coordination of cognitive and social processes. More detailed information requires more sophisticated coordination of both. Often without text, non-verbal exchanges cannot sufficiently convey more explicit or nuanced information (Sandberg & Liliedahl, 2008). Thus, we frequently rely on spoken language to fully articulate thinking. Halliday (1975) argued language is such an integral piece in the development of a social system; it impacts a child's construction of "reality" (p. 120). According to Halliday (1975), linguistic and social systems are so inter-related; one cannot be learned without the other.

Light (1988) suggested four primary reasons for communication: expression of needs and wants, social closeness, sharing information, and to "fulfill the established conventions of social etiquette" (p. 61). The fourth area describes the more mundane daily pleasantries exchanged by less familiar individuals, more as a matter of routine than the meaningful exchange of information, needs or emotion. The successful transfer of this information involves a series of cooperative actions and responses on the part of both the speaker and listener (McCormack Et al., 2010; Simmons-Mackey, Kingston, & Schultz, 2004; Tannock & Girolametto, 1992). Both must adapt to subtleties in speech fluency, intonation, grammar, and syntax (Patel & Campellone, 2009). They must also consider the contextual items that exist within and around the conversation (Simmons-Mackey et al., 2004). Without this contextual backdrop, words alone are easily misinterpreted (Hustad, 2007).

Instead, one relies upon the interplay between context and meaning. This is known as pragmatics. Pragmatics includes not only signal-dependent communication such as speech volume, fluency, and intonation, but also behaviors Lindblom (1990) identified as signal-independent such as body movement, gesture, and gaze (Keen,

Sigafoos, & Woodyatt, 2005). These are considered to be unaided communication systems in that unlike external AAC, they rely entirely on the user's body to convey messages (USSAAC, 2013).

Halliday (1975) described text as “the language people produce and react to, what they say and write, and read and listen to, in the course of daily life” (p. 123).

Communication using text is considered operational language. This differs from citational language in that it considers not only the words, but also the style and content of the overall message (Halliday, 1975). In this instance, text is a matter of choice. Given the complex nature of communication that includes expressive language, when speech is adversely affected or absent, interaction between two individuals is far more challenging and leaves more room for interpretive error.

The balance between verbal and non-verbal communication is complex. Strengths and weaknesses in these areas often impact social skill since individuals may misinterpret verbal or physical messages, thereby missing social cues. Patel and Campellone (2009) called the combination of mental and physical process required to understand all aspects of language, “prosody” (p. 216). They stated that individuals rely on prosody to accurately communicate and understand verbal messages. This requires one move beyond explicit text to assessment of body language, rate of speech, and tone of voice. An inability to do so negatively impacts communication resulting in dysprosody.

Post-structuralism highlights the complex relationship between meaning and the understanding of language. Post-structuralists do not see ideas as the source of language, rather, view ideas as the effects of meaning. Essentially this highlights the relationship between the signified and the signifier. Linguistic meaning is derived from the signifier;

the idea is that which is signified. Without the signified, meaning would not exist (Campbell, 2011). Language combines the semantic and the semiotic. Creating meaning is learned much like any other activity and follows a developmental process that is both cognitive and social (Halliday, 1975). Halliday proposed, “the social context is not so much an external condition on the learning of meanings as a generator of the meanings learnt” (p. 140).

Within this framework it is important to distinguish between the technical aspects of language such as phonological and grammatical rules, and the more functional communicative components of language such as semantics and semiotics. All four of these areas impact language development. However, it is the semantic and semiotic areas of language that have the greatest impact on meaning and thus have the most impact on social interaction. The cooperative roles of speaker and listener affect the communication outcome. The message the speaker intends to convey may or may not be the message that is ultimately received by the listener. Therefore, the absence of signal dependent text has a profound impact on social interaction and thus, social problem solving.

Language, Identity, and Empowerment

According to Burke (1991), “an identity is a set of ‘meanings’ applied to the self in a social role or situation defining what it means to be who one is” (p.837). Though one may employ a variety of roles they endeavor to create congruence between what they believe their identity to be and the reflected appraisals of the outside world (Zanna & Cooper, 1976). When individuals interact, they must coordinate behavior to restore order and minimize disruptions to their self-perception (McCall & Simmons, 1978). This

experience is similar to cognitive dissonance, but is more specific in that it is directly related to input and identity standard (Burke, 1991).

Burke (1991) called the identity process a control system whereby one endeavors to modify behavior to change external input to match their identity standard. This input is known as a reflected appraisal. Reflected appraisals describe the “mirrors” in which one sees the self in the reactions of others (Burke, 1991). It is generally these reflections that direct one’s behavior in any given situation. Burke and Stets (2009) suggested language provides social control. One’s ability to ascribe meaning and communicate meaning to another offers an opportunity for the emergence of the “self.” However, the perceptions of the listener play a significant role. Powers (1973) perceptual control model implied behavior in and of its self is not what is important. Rather, it is the impact of the behavior on the perception of others. In some instances an identity standard is not supported by the reflected appraisals of others. When one’s identity performance is not supported, stress occurs and negative emotions ensue.

To manage these uncomfortable feelings and to restore the identity standard, individuals use what McCall and Simmons (1978) called, “mechanisms of legitimation” (p. 92). These mechanisms include *short-term credit*, *selective perception*, *interpretation*, *blaming*, *disavowal*, *switching identities*, and *withdrawal*. Short-term credit describes temporary support for an identity based on previous role performance. Much like a credit account, when one’s role performance is not successful, individuals may draw on previously successful performances until the identity disruption has passed. For example, a winning baseball pitcher who is experiencing a slump may ask his teammates for patience, reminding them of his previous success.

An additional mechanism is selective perception. McCall and Simmons (1978) described this mechanism as one where actors attend only to cues that support their identity standard. Referring again to the baseball pitcher, he may focus on positive verbal or nonverbal cues that support his position while ignoring contradicting cues. Expanding upon selective perception is selective interpretation. In this case, an actor may view a cue as supportive of their identity even when it is not. Negative emotions may result in the mechanism of blame. For example, the pitcher may blame his poor performance on an injury or the performance of his teammates. Or, he may disavow his performance as an unintended consequence of his poor health while reinforcing his desire to play well. In some instances, actors may switch to an identity that offers more potential for confirmation or may withdraw from the interaction entirely. The goal of these mechanisms is similar to those of face-saving since “face” is also affected by identity needs (Folger et al., 2001).

Much like an identity standard, face describes one’s desire to be perceived in ways that reinforce what they consider their abilities, traits, skills, or qualities. Although scholars may agree on the underlying needs of face, there is disagreement as to particular “face wants.” Perhaps the most popular view is Brown and Levinson’s (1987) politeness theory. According to Folger and colleagues (2001), “Politeness theory views ‘face’ as something that can be lost, maintained, or enhanced and requiring constant attention during interaction” (p. 175). It is referred to as politeness theory since the degree of the face threat will impact the level of “politeness” in the individual’s response.

Brown and Levinson (1987) offered two dimensions of face: positive and negative. Positive face describes an individual’s desire for acceptance or approval from

others while negative face describes the need for autonomy. Politeness theory suggests three primary factors signifying the degree to which face is threatened. These include: “the social distance between parties, the power of the parties, and the intrusiveness of the request or act” (Folger et al., 2001, p. 175). Lim and Bowers (as cited in Folger et al., 2001) proposed expansion of positive face to include the need for inclusion and the need for respect. They suggested the need for inclusion is external approval of the person and personality, while respect is the approval of abilities and skills. Lim and Bowers identified three types of face needs. These include the fellowship face, the competence face, and the autonomy face. The fellowship face identifies an individual’s need for inclusion while the competence face describes the need for recognition of one’s abilities or skills. Finally, the autonomy face describes one’s resistance of outside imposition (Lim & Bowers, at cited in Folger et al., 2001).

Like attribution errors, both face saving and legitimation mechanisms may include blame, criticism, and sanctioning. However, the goal of these tactics is to alter behavior to adjust reflected appraisals. Both feelings and responses will be more intense and disruptive based on the degree of the relationship between two people: the more significant the relationship, the greater the level of discomfort and stress (Burke, 1991). In cases where an individual blames him or her self for the identity disruption, negative feelings are inwardly directed (Stets and Burke, 2005).

An additional component of identity theory is the notion that behavior is impacted by individual goals. Of this Burke and Stets (2009) indicated:

Perception and action are intertwined and related through a mind that has socially developed to respond, not just to the environment, but also to the

relationship between the person and the environment, adjusting each to meet the needs, goals, and desires of the person. (p. 20)

Identity theorists focus on various different areas of an individual's identity standard. These include the impact of social structure on behavior and identity (Stryker & Burke 2000; Burke, 1991; Serpe 1987), the internal dynamics influencing behavior (Burke and Stets, 2009, 1999; Cast, Stets, and Burke 1999; Burke, 1991), and face saving in social interaction (McCall 2003). Burke and Stets (2009) suggested that when identity is triggered, a feedback loop is created. Included in this loop are four areas: (1) identity standard, (2) reflected appraisals, (3) comparison of perceptual input and the feedback of others, and (4) behavior resulting from the difference between the identity standard and reflected appraisals.

An identity interruption occurs when this loop is broken and the identity process no longer functions naturally. Burke (1991) offered two ways this may occur. One is the point where the output meets the environment. In other words, one's behavior may do little or nothing to alter the behavior of the other or impact the situation as a whole. One is unable to effect change or gain attention. In some cases, an unintended meaning is imposed upon one that contradicts their wishes or behavior.

A second area or weakness is the point at which input is received from the environment (Burke, 1991). One may misunderstand the input received from the environment, or may be unable to understand it at all. In this case, the issue is the individual's perception of the situation rather than their behavior. They may not fully appreciate the impact of their behavior on the situation and come away feeling misunderstood. There are differences between these two areas of breakdown. In the first

area, behavior has no effect on the situation. In the second, the impact of one's behavior is unintended and/or unexpected (Burke, 1991). In either case, the result is an increase in stress level. It is important to note that although Burke described identity interruptions in the context of a more holistic idea of behavior, behavior within this context includes one's use of language. Thus, one's ability to effectively use language may have an effect on one's identity standard.

In her 1987 work, "*Feminist Practice and Post-Structuralist Theory*," Weedon described the intimate connection between language and identity. Of this Weedon (1987) said, "Language is the place where actual and possible forms of social organization and their likely social and political consequences are defined and contested. Yet it is also the place where our sense of ourselves, our subjectivity, is constructed" (p. 21). The notion that language and identity are innately connected has been used to describe various societal experiences including those of women in a paternalistic society as well as second language learners who endeavor to make themselves heard and understood in an unfamiliar culture. Peirce (1995) argued second language acquisition requires an understanding of the role of language in social identity while Heller (1987) suggested, through language one gains or is denied access to more powerful social networks. Individuals with specific language impairment (SLI) may have difficulty immediately adjusting output behaviors and thus, struggle to alter the reflected appraisals of others. In addition, they risk identity interruption resulting from difficulty communicating.

To successfully socially interact with others, one must recognize their own identity, but also understand and participate in larger social constructs. Successful peer interaction and acceptance is a critical component of this process (Craig, 1993). Not only

must one have to ability to make friendships, but also to maintain them. Children with SLI often encounter social challenges. Fujiki, Brinton, and Todd (1996) examined the social functioning of 19 elementary students with SLI. Using the Social Skills Rating Scale-Teacher, Informal Picture Task, and the Williams and Asher (1992) Loneliness Questionnaire, researchers assessed the ability of participants to socially interact with peers. Researchers found children without CI use language to share information and feelings, direct behavior, and resolve conflicts. They generally preferred interacting with other peers who use similar communication styles. Since children with SLI interact differently than children without SLI, they tended to prefer communication with adults. In addition, they were found to derive less satisfaction from their social relationships than non-CI peers (Fujiki et al., 1996).

While many linguists believe a component of communication is the reciprocity of worthiness (those who speak regard the listener as worthy to listen and those who listen regard the speaker as worthy to speak), Bourdieu (1977) argued individuals have “the power to impose reception” (p. 648) or a right to speak regardless of perceived worthiness. One could argue this includes those who communicate through more non-traditional means where identity, power, and worthiness may be called into question on a far more frequent basis. Along these lines, an important area of conceptual literature concerning those with disabilities is empowerment theory.

Psychologically empowered is a term describing one’s perceived control. This includes the domains of personal efficacy, locus of control, and motivation (Zimmerman, 1990). Efficacy and self-efficacy are two constructs put forth by psychologist Albert Bandura. Bandura (1977) described efficacy as the belief that a specific behavior will

lead to a specific outcome, while self-efficacy is one's belief in their ability to execute said behavior to achieve the desired outcome. Locus of control is the degree to which individuals believe their actions can effect change. Rotter (1966) suggested this construct includes two dichotomous orientations: internal and external. Those with internal orientations view reinforcement as the direct result of their actions while those with external orientations see reinforcement as the result of uncontrollable, outside forces.

Wehmeyer (1994) found individuals with disabilities have a more externalized orientation than disabled peers. Thus, they perceived themselves to have far less control and autonomy than non-disabled peers. Research examining behavior has explored the impact of internal and external forces on one's motivation to take action. Motivation describes one's ability to identify and actively pursue goals. According to Wehmeyer (1999), "Theories of motivation attempt to explain what 'moves' people to behave and mechanisms ranging from internal drives and traits to environmental regulators of behavior have been hypothesized" (p. 53).

In the area of social service, the term empowerment has been used to describe both a beneficial process and a beneficial outcome (Dempsey & Foreman, 2006). In assessing the appropriateness of educational programs for children with disabilities, Sarason (1990) suggested the goal should be as follows: "To produce responsible, self-sufficient citizens who possess the self-esteem, initiative, skills, and wisdom to continue individual growth and pursue knowledge" (p. 163). Halloran (1993) described this as self-determination. Martin and Marshall (1995) posited self-determined individuals are able to make choices, express needs, set goals, and solve problems. Those who feel empowered, demonstrate behaviors often associated with adulthood in that they are able

to independently make decisions about their life and are autonomous enough to carry them out. Autonomy in this instance describes one's ability to make decisions based upon personal preference regardless of outside influence or interference (Wehmeyer, Sands, Doll, & Palmer, 1997).

Wehmeyer and associates (1997) suggested self-determined behaviors are dispositional characteristics that are consistent over time regardless of external influence. Within this definitional framework, they offered four essential characteristics of self-determined people: (a) the person acted autonomously, (b) the behavior(s) are self-regulated, (c) the person initiated and responded to the event(s) in a psychologically empowered manner, and (d) the person acted in a self-realizing manner (p. 307). However, these characteristics may present differently for different individuals and across various settings. As a result, Rappaport (1984) suggested empowerment might be easier defined through the existence of antithetical concepts of alienation and powerlessness. Further, the construct of empowerment operates on both a macro and micro level, with some theorists viewing empowerment as the ability to effect large scale systemic change (Disability Advisory Council of Australia, 1993; Parsons, 1991; Zimmerman, 1990; Dunst, Trivette, Gordon, & Pietcher, 1989; Serrano-Garcia, 1984; Miller, 1983; Solomon, 1976), as well as interpersonal and individual empowerment (Simon, 1990; Zimmerman, 1990; Conger & Kanungo, 1988, Solomon, 1987).

Within the area of empowerment scholarship, the definition of the term varies widely among published authors. Based upon an extensive review of empowerment literature, Dempsey and Foreman (2006) indicated the following are the key components of empowerment:

Table 1

Key components of empowerment

Component	Definition
Self-Efficacy	A belief in the ability to produce intended results (Solomon, 1976).
Participation and Collaboration	Unlike the view of the help-seeker as deficient, the development of a collaborative relationship where the help-seeker is encouraged to assume responsibility in decision making (Dunst et al., 1989; Rappaport, 1984).
Sense of control	Provision of climate, relationship, and resources whereby people can enhance their own lives (Simon, 1990).
Meeting personal needs	Supporting the individual needs to increase capability and competency (Parsons, 1991; Dunst et al., 1989).
Understanding the environment	Individual understanding of available support services (Dunst et al., 1989).
Personal action	Action taken to address needs on either a micro or macro level (Simon, 1990; Zimmerman, 1990; Solomon, 1987).
Access to resources	The ability to access resources in order to exercise control over one's life Serrano-Garcia, 1984).

The process of empowerment is dependent upon an extensive understanding of the environment. This includes an awareness of resources as well as a belief in one's competence in decision-making and effecting change. Similar to an identity standard, one seeks to achieve self-realization whereby individuals have an understanding of themselves that is reflected in the behavior and responses of others. However, empowerment goes beyond reinforcing the identity standard to whether or not one has the access and capability necessary to impact their environment.

Communication Impairment

The American Speech-Language-Hearing Association (2012) defines communication impairment (CI) as: "impairment in the ability to receive, send, process, and comprehend concepts or verbal, nonverbal, and graphic symbol systems". A communication disorder may be evident in the processes of hearing, language, and/or

speech (ASHA, 2012). CI individuals may have impairments ranging from mild to profound and may demonstrate one or all components of the diagnostic criteria. In some cases individuals who are unable to speak or aphasic, are cognitively intact. Thus, they understand language and continue to seek social interaction and meaningful communication with peers. This may be accomplished through alternate means of interaction, such as sign language or use of an external augmentative alternative communication (AAC) device.

This is particularly true of individuals suffering from a motor speech disability. A motor speech disability is a speech impairment caused by a lesion or dysfunction of motor centers. It occurs in the peripheral or central nervous systems or a combination of both (Love, 1992). Clinically, *motor speech disability* encompasses dysarthria as well as apraxia of speech. Dysarthria describes disturbances in motor centers related to the physical production of speech. These motor issues impact the strength, speed, steadiness, coordination, precision, tone, and range of movement in the speech musculature (Love, 1992). Individuals with dysarthria are still capable of producing speech; however, due to severe muscular collusion, those with anarthria are entirely unable to speak. Dysarthria differs from verbal apraxia in that apraxic individuals are unable to produce specific motor gestures when endeavoring to speak, yet are capable of the same motor gestures in other autonomic non-verbal acts (Love, 1992).

In children, dysarthrias are symptomatic in the areas of respiration, phonation, resonance, articulation, and prosody (Love, 1992). Symptoms related to respiration will impact the rate of speech. The result is difficulty with air control or increased subglottal pressure. Phonation describes the pitch, volume, and intonation of speech. Poor

phonation will result in poor pitch control, or monotone speech resulting from poor timing of voice respiration or immobility of the larynx. Resonance describes the overall sound or quality of the voice. Dysarthritic symptoms related to resonance may include nasality of the voice or incoordination of the muscles that raise the back of the tongue. Articulation issues are difficulties with the production of specific sounds. Finally, prosody in dysarthria describes the speed, timing, and rise and fall of speech in conversation. Dysarthritic symptoms in the area of prosody may include slower rates of speech or monotone presentation.

Several studies have investigated the experience of communication-impaired individuals in the speaking world. Much discussion has focused on the role of pragmatics in communication. Pragmatics is an area of linguistics that investigates the relationship between context and meaning. Ramsberger and Menn (2002) suggested that non-CI listeners must look beyond semantics and become sensitive to contextual and behavioral cues. Not only is communication effected by the acoustical signal (Hustad et al., 2003; Lindblom, 1990) and linguistic knowledge, but also additional meaning may be derived from the paralinguistic and experiential knowledge (Hustad et al., 2003).

Hustad et al. (2003) described paralinguistics as non-verbal behaviors that are pertinent to communication. These include behaviors such as gestures, facial expression and eye contact (Sandberg & Liliedahl, 2008; Hustad et al., 2003). The listener takes both the linguistic and paralinguistic information and uses experiential knowledge to further establish meaning (Hustad et al., 2003). This includes common experiences or knowledge shared by the speaker and listener. It is through a composite of word and behavior that the listener ascribes meaning to the speaker's message (Keen et al., 2005; Simmons-

Mackie et al., 2004). Conversely, Joannette and Ansaldo (1999) viewed pragmatic ability as a purely language based paradigm with limited connection to cognition while Wilson (2005) identified it as an inferential component to pragmatic interpretation.

Researchers working with non-verbal children with Autism Spectrum Disorder (ASD) argued that the atypical behaviors of ASD children demonstrate the use of pragmatics. Damico and Nelson (2005) posited the continued existence of these behaviors demonstrate the ASD child's utilization of pragmatic skills to meet specific needs (Siegler, 2007). As a result, Siegler (2007) suggested that children with ASD are incorporating pragmatics into communication and that children without ASD adapt to these behaviors. To this point, Keen et al. (2005) offered a list of ASD behaviors that serve specific communicative functions. These behaviors were observed in the interactions of children with autism and their teachers.

Table 2

Behaviors observed in children with autism

Requesting object	Behaviors initiated by the child that direct the receiver to provide an object to the child.
Requesting action	Behaviors initiated by the child the direct the receiver to cause an action to occur.
Attention to self	Behaviors used to call attention to the child.
Comments	Behaviors that direct the listener's attention to some observable referent, such as an action or movement of an object, its appearance or disappearance.
Social convention	Behaviors that occur in the context of a routine or convention. Greetings, responding to name and turn taking are included.
Reject/protest	Behavior that lets the listener know that the child doesn't want something suggested or initiated by another, disapproves of

	something or wishes to terminate an event that has already begun.
Responses	Behaviors produced in response to a question from another.
Requesting information	Behaviors that direct the receiver to provide information or clarification about an object, action, activity or location.
Imitation	Repeating words or actions

The emergence of nonconventional behaviors in the communication patterns of CI individuals suggested an attempt to transmit complex messages even in the absence of language (Douglas, 2010; Taibo et al., 2010; Sandberg & Liliedahl, 2008; Keintz et al., 2007; Siegler, 2007; Hengst, 2003; Brinton et al., 1997).

Keintz et al. (2007) explored the differences in auditory-visual and auditory only communication between individuals with and without CI. Of the non-CI conversation partners, some had experience communicating with a CI partner while others did not. Both groups felt that auditory-visual communication was more effective than auditory only communication (Keintz et al., 2007). Further Hustad et al. (2007) discovered that by providing alphabet cues with an augmentative and alternative communication (AAC) device, listeners are better able to discern the meaning of communication based on semantic logicity. In terms of communicative competence, the research indicates that both adults and children with CI considered themselves capable of communicating (Sandberg & Liliedahl, 2008; Hustad, 2007; Siegler, 2007; Hengst, 2003; Whaley, & Parker, 2000; Bedrosian et al., 1998; Brinton, et al., 1997). Frequently, frustrations experienced were the result of the inability of the listener to understand the message (Sandberg & Liliedahl, 2008; Hustad, 2007; Siegler, 2007; Hengst, 2003; Whaley, &

Parker, 2000; Bedrosian et al., 1998; Brinton, Fujiki, Spencer, & Robinson, 1997) rather than a frustration concerning CI.

Several studies described the social challenges faced by those with CI. Pennington et al. (2009) and McCormack et al. (1997) found that difficulty speaking negatively impacts a child's social participation. This appeared to be more significant for those who are unable to speak, as listeners seemed more willing to initiate interaction with CI individuals who have more some degree of speech intelligibility (Hustad et al., 2004). A study performed by Gertner, Rice, and Hadley (1994) found preschoolers possessing poor communication skills were considered unpopular by peers. Strong verbal ability had a high correlation with the perception of social appropriateness and approachability (Pennington et al., 2009; Brinton et al., 1997). As a result, children with CI often became "silent partners" (Brinton et al., 1997, p. 1018) who were over-looked by peers (Pennington et al., 2009; Sandberg & Liliedahl, 2008; Simmons-Mackie et al., 2004; Brinton et al., 1997).

When communication is attempted, it differs from an interaction between individuals who do not have communication impairment. Rather than a relatively equal relationship between participants, one member may be having difficulty (Anward, 2002). As a result, the non-CI individual often takes on more responsibility for the success of the interaction. Marshall (1998) suggested individuals with aphasia require a supported conversation approach (SCA) as a form of intervention. In this approach, spouses, social workers, and caregivers endeavor to support aphasic individuals in expressing their feelings, thoughts, or needs through whatever means possible (writing, gesturing, or drawing). However, maintaining the flow of conversation requires a great deal of

training. Researchers expressed concern that the intense on-going need for training and support for participants in the SCA program prevent some from participation. This is especially true in countries where immediate intervention is the accepted practice and funding for long-term support is either limited or unavailable (Marshall, 1998).

Pennington and colleagues (2009) found when parents endeavor to communicate with preschoolers with CP, they frequently controlled the conversation in an effort to increase understanding and prevent communication breakdown. Cerebral palsy (CP) presents many communication issues. Westlake and Rutherford (as cited in Love, 1992) indicated, “In no other clinical population is one likely to find such a variety of conditions that can disturb and delay acquisition of oral language as the group diagnosed with cerebral palsy” (p. 41). Within the CP diagnosis, three primary types of dysarthria are identified: spastic, dyskinetic, and ataxic (Love, 1992). The spastic type is the most common motor disorder in CP. It is often the result of neonates who have experienced reduced oxygen and/or blood flow during birth. In this presentation, speech is characterized by muscle weakness and articulatory instability due to rigidity of the speech muscles. Dyskinetic dysarthria is characterized by hypotonia or muscle weakness, while ataxic dysarthria presents as inconsistent intonation and articulation of speech. To compensate for the challenges of verbal communication, individuals with CP often rely on external AAC devices to communicate with the outside world.

Augmentative and Alternative Communication (AAC)

ASHA (2013) states “Augmentative and alternative communication (AAC) includes all forms of communication (other than oral speech) that are used to express thoughts, needs, wants, and ideas.” AAC endeavors to compensate for communication

challenges faced by those with severe communication disorders. Depending on the diagnosis, the need for AAC may be temporary or permanent. An AAC system is comprised of four components used to enhance communication. These components include symbols, aids, techniques, and/or strategies (ASHA, 2013).

Facial expressions, gestures, pictures, and writing are considered unaided AAC. Aided AAC includes any tools or devices that are external to the user's body. They range from writing tools, to communication boards to a device that essentially generates language. These speech-generating devices (SGDs) produce a voice output for a CI individual who is unable to express language by any other means (ASHA, 2013). Depending upon the needs of the user, an SGD may provide picture prompts, letters, an internal vocabulary, words or phrases, and/or a keyboard. Through encoding, they are able to store and retrieve language as well as predict messages (USAAC, 2013). For some, these devices are touch-sensitive. The input from the CI individual is then converted into a digitized or synthesized speech output. Although spoken language may not be physically possible, communication is still achievable.

Communicative competency describes the goal of individuals who endeavor to communicate through non-traditional means. Light, (1997) described the impetus for achieving communicative competency in this way:

Communication is about touching other people and about having our lives touched by others. Communication is about laughing and arguing, learning and wondering why, telling stories, complaining about what is or what isn't, sharing dreams, celebrating victories. Developing communicative competence allows us

to realize the essence of our humanity — to touch the lives of others and to be touched by others. (p. 61)

Achieving this goal is not without challenge. A study by Anderson, Baladin, and Clendon (2011) examined the friendships of children with peers using external AAC. Researchers found although it is generally the personal qualities of children using AAC that attract peers, they faced additional challenges making and maintaining friendships. Guralnick, Gottman, and Hammond (1996) suggested this is largely due to communicative ability. Children communicating with a peer using external AAC indicated communication was frequently difficult due to technological issues with the SGD, and/or the response time of the AAC user (Anderson et al., 2011).

A study by Clarke, Bloch, and Wilkinson (2013) examined features of speaker transfer in a conversation between a child using a voice-output-communication aid (VOCA) and a non-AAC using peer. Of specific interest was conversational progressivity. Progressivity refers to the components of a conversation that require a cooperative pattern between actors such as sequential turn taking when speaking. Use of a communication aid often results in delays in speaker transfer or the silence between the end of a natural speakers turn and the start of the VOCA generated output. According to Jefferson (1989), the maximum silence tolerable in a typical exchange is approximately one second. These delays were generally longer when children with CI are working with their communication aids. Due to this delay adults conversing with children using external AAC devices often resorted to conversations requiring “yes” or “no” responses in an effort to continue this turn-taking exchange (Clarke et al., 2013).

Of additional concern to researchers was the inequity of the relationship. Peers often took the role of caregiver, protector, or “normalizer” to their AAC using peer (Anderson et al., 2011, p. 85). Anderson and colleagues (2011) found this is sometimes the result of pressure from teachers, parents, and peers. This altered the dynamic of a typical friendship in that peers saw the AAC using individual as more of an altruistic endeavor than a trusted friend. Further, the non-AAC using peer often assumed an understanding of what the external AAC individual was trying to communicate limiting their ability to fully express their thoughts, opinions, and feelings (Beukelman & Mirenda, 2013). Anderson and colleagues (2011) suggested the limiting of communicative independence would ultimately prove detrimental to the social experience of the individual with a disability.

One of the most positive occurrences in the lives of individuals with complex communication needs has been the explosion of mobile technology devices (McNaughton & Light, 2013). In addition to the dramatic increase in communication supporting software, this technology has provided a sense of social acceptance that was previously unavailable to individuals using external AAC. A parent of a teenager using external AAC describes the positive social effects of an iPad in comparison to traditional SGDs:

[the iPad] provides a rather elegant solution to the social integration problem. Kids with even the most advanced dedicated speech device are still carrying around something that tells the world ‘I have a disability.’ Kids using an iPad have a device that says ‘I’m cool.’ And being cool, being like anyone else, means more to them than it does to any of us. (Rummel-Hudson, 2011, p.22).

This type of assistive technology has been introduced into a demographic that in previous years may not have considered AAC a viable communication option. Individuals using external AAC represent a wider range of ages and disabilities than any point in history (Beukelman, 2012). These devices are generally more affordable than traditional SGDs with more familiar technology (McNaughton & Light, 2013). Communicative benefits along with social acceptance, affordability, and ease of use have made mobile devices a very accessible option for individuals and families.

Despite the fact that mobile technology has expanded opportunities for communicative competency (Light, 1997), even these technological advances must be carefully considered in terms of individual benefit. Given the wide range of strengths and needs in individuals with complex communicative requirements the “one size fits all” approach to intervention may be far more limiting. McNaughton and Light (2013) suggested four critical areas to consider when exploring options offered through mobile technology: (a) to keep the focus on communication and not just technology, (b) to develop innovative approaches to AAC assessment and intervention, (c) to ensure ease of access to AAC for all individuals with complex communication needs, and, (d) to maximize AAC solutions to support a wide variety of communication functions (p.110). At present, countless apps are available for use by those in need of external communication devices. However, often these pieces of technology are purchased without the input of professionals (McNaughton & Light, 2013). For example, some require highly coordinated fine-motor movements. For some individuals such as those with cerebral palsy, the combination of motor issues coupled with complex communication needs may render such applications less effective.

Augmentative and alternative communication (AAC) devices have provided a method whereby those with CI may increase language production (Taibo et al., 2010; Bedrosian et al., 2009; Pennington et al., 2009; Diener & Bischof-Rosario, 2004; Lindblom, 1990). This allows those with severe CI to engage in conversation (Pennington et al., 2009) with others beyond simple “yes” and “no” responses. This is perhaps the greatest achievement of the AAC device: its ability to replace single word responses or initiations with phrases and expanded messages (Diener & Bischof-Rosario, 2004; Bedrosian et al., 1998). Taibo et al. (2010) posited that language skills are more discernable through use of the AAC. In spite of this type of assistive technology, changes in patterns of interaction between CI and non-CI peers were not consistently evident (Pennington et al., 2009). Thus, early intervention involving the use of external AAC may be useful in order to provide foundational skills in the use of AAC to achieve communicative competency (Taibo et al., 2010; Pennington et al., 2009; Diener & Bischof-Rosario, 2004; Lindblom, 1990). In addition to introducing the CI individual to external AAC, training family members, teachers, clinicians, and peers in how to communicate with individuals using external AAC will further support the communicative exchange (Diener & Bischof-Rosario, 2004; Bedrosian et al., 1998).

The World Health Organization (2001) identified participation as one’s interaction with their environment. Participation includes all aspects of daily life: participation in school, work, recreational activities, and establishing and maintaining friendships. For external AAC users, communicative competency (Light, 1997) increased their ability to fully participate in their environment. Although conflict exists within any social relationship, the majority of research concerning the communication impaired

population focuses on intervention, communication, and socialization. Research specifically addressing the development of conflict and the conflict resolution process among this population was not found. Future research in this area would be very beneficial for individuals with communication impairments as well as those with whom they interact.

Language in Social Interaction and Conflict Resolution

McCall and Simmons (1978) suggested much like the cooperative relationship required to maintain an identity loop, conflict between individuals requires a similar degree of coordination to support negotiation and compromise. Individuals must move beyond egocentrism to higher-level conflict resolution skills. These skills include empathy, accommodation, perspective taking, and collaboration to name just a few. Many language-based skills are required when one attempts to discuss points of contention with another individual.

Bolton (1979) proposed reflecting listening and responding are important component of successful problem solving. Of this Bolton (1979) stated, “In a reflective response, the listener restates the feeling and /or content of what the speaker has communicated and does so in a way that demonstrates understanding and acceptance” (p. 50). An effective reflective response offers a succinct, non-judgmental, and accurate reflection of the experience of the other. Of equal importance to an understanding of the details, is validation of the other’s feelings. In order to successfully reflect feelings one must attend to the more subtle pieces of communication that exceed spoken text. These pieces include a focus on feeling words, the overall content of the message, the body

language of the speaker, and finally, an exploration of one's own feelings if they were to experience a similar situation.

Ury's (1991) book *Getting Past No*, provided more concrete examples of similar cooperative strategies and their positive effect on the conflict resolution process. Rather than focusing on divisive issues, Ury (1991) encouraged disputants to concentrate on common ideas and beliefs while acknowledging the position of the other. This is called "stepping to their side." The use of "I messages" rather than "you" messages allows for the focus to remain on the feelings rather than the character of the disputant. This allows communication between two parties to continue without one side feeling as if they have been challenged or attacked.

Much like Bolton's reflective response, reframing allows for de-escalation of a budding confrontation through the demonstration of understanding (Ury, 1991). Several scholars described a method that is frequently used in the counseling field, empathic listening (Katz, Lawyer, & Swindler, 2010; Tannen, 1992; Ury, 1991; Bolton, 1979). Empathic listeners validate the emotions and feelings of the other, allow for silence, and use the ideas of the other individual or party as a part of the basis for a workable solution. They ask clarifying questions but also value the power of silence. Conflict resolution involves both sides taking some responsibility for the issues that created the conflict. Both sides agree to make some changes to their behavior in order to move forward. In this way, neither side feels overpowered; rather they come away from the exchange feeling not only validated, but also committed to working together seeking resolution.

Tannen (1992) suggested in addition to the aforementioned behaviors, conversational style heavily impacts the quality of relationships. She outlined several

linguistic behaviors that serve to either support or interfere with social interaction. One example of this type of linguistic device is the combination of messages and metamesages. Messages are the pieces of information that are explicitly conveyed through words. Metamesages, according to Tannen (1992) are, “how we say, what we say” (p. 16). Messages and metamesages combine the choice of words used, the way they are spoken, and one’s decisions to speak or not speak. Tannen (1992) suggested the nature of this interaction conveys a great deal about a relationship.

When in conflict, misunderstandings may be attributed to a failure on the part of the speaker or the listener or perhaps incompatibility in communication style. Tannen (1992) proposed that although individuals may endeavor to resolve conflicts through conversation and discussion, they still risk misunderstanding. They may not accurately convey thoughts or feelings or may be misunderstood by their conversation partner. This level of understanding is largely influenced by metamesages (Tannen, 1992). Of this Tannen (1992) said, “Often focusing on the words spoken precludes figuring out what sparked a crisis, because the culprits are not the words but the tone of voice, intonation, and unstated implications and assumptions” (p. 121). During these times of misunderstanding, individuals frequently blame the other rather than the situation or the authenticity of the messages and metamesages. Negative behaviors may be attributed to the character of the individual, rather than a misinterpretation of content or intent.

Attributions are the perception of the origin of the behavior of another and in turn, the response to the perceived behavior. According to Weiner (1985), it is this manner of thinking and feeling that influence action. Individuals often make faulty assumptions about the character and motivations of another, especially in times of

conflict. This may lead to a judgmental analysis of both behavior and motivation. This analysis is based on dispositional and situational factors. Dispositional factors refer to aspects of an individual's character whereas situational factors refer to external situations to which one responds (Folger, Poole, & Stutman, 2001).

When in conflict, individuals often attribute the behavior of others to aspects of their character (dispositional factors) while attributing their own behavior to situational factors. Folger and colleagues (2001) called this a fundamental attribution error. To find causes or explanation for unfavorable events, individuals will frequently assign blame to a person, group, or situation (Coombs, 2007). In order to maintain a positive self-concept, individuals will attribute actions that result in negative consequences to external forces while attributing positive outcomes to themselves. This is known as a self-serving bias (Folger et al., 2001).

Responses to conflict are often the result of previous experiences that impact one's interpretation of a situation or event. These cognitive structures are called *frames* (Folger et al., 2001). Rogan (as cited in Folger et al., 2001) identified 6 dimensions of conflict frames that influence interpretation of interpersonal conflict. These include:

Table 3

Six dimensions of conflict frames

Instrumentality:	The degree to which the party focuses on factual or substantive issues and outcomes
Other Assessment:	The degree to which the party focuses on the other's conduct and judging whether it was good/bad, right/wrong, fair/unfair
Affect:	The degree to which the party has negative emotions toward the

	other or the conflict in general
Face:	The degree to which the party focuses on issues related to self-image
Affiliation:	The degree to which the party is concerned with finding a mutually-acceptable solution and maintaining a good relationship with the other
Distributiveness:	The degree to which the party interpreted the conflict in win-lost or competitive terms (p. 55).

Previous interactions between those engaged in conflict will also guide their framing of the dispute. Unlike beliefs and scripts that color that way we interpret a situation, frames emerge in response to a conflict and are context specific (Folger et al., 2001).

Researchers suggested skills related to conflict resolution are important developmental milestones in relation to social skill (Laursen, Finkelstein, & Betts, 2001; Fujiki et al., 1996). A meta-analysis of peer conflict resolution attempted to identify developmental trends. Three primary tactics were identified: negotiation, coercion and disengagement. For the purposes of this study, peer relationships were divided into acquaintances, friends, romantic partners, and siblings. Laursen and colleagues (2001) found strategies do in fact change with age. Children are more likely to use coercion, while adolescents and young adults will use negotiation. These findings hold true in all relationships except between siblings. In addition, although when presented with a hypothetical conflict, negotiation may be recognized as the preferred conflict resolution method, it is coercion that is more frequently used to resolve actual conflicts. Researchers

further found across the majority of peer relationships, coercion decreases with age while negotiation increases (Laursen et al., 2001).

Blum, Resnick, Nelson, and Germaine (1991) examined the family and peer interaction experiences of adolescents with spina bifida and cerebral palsy. Participants indicated they valued peer relationships but stated interaction outside of school was very limited. Activities with peers fell into four primary categories: (1) passive entertainment such as television viewing; (2) active immobile entertainment such as chess or checkers; (3) active mobile activities such as sports; (4) and organized activities such as clubs (Blum et al., 1991, p. 282). The majority of participants engaged in activities falling into the first two categories. Researchers also discovered that while adolescent/parent conflict is a significant developmental component of the adolescent shift toward peer-centered relationships, participants did not identify conflict as a component of relationships with parents and described their relationships as “good.” Blum and colleagues (1991) questioned whether dependence upon parents might delay this piece of adolescent development.

Stevens and Bliss (1995) examined the conflict resolution ability of 60 children in grades 3 through 7, thirty children with specific language impairment (SLI) and 30 children with normal language (NL). Using a hypothetical problem scenario, children were asked to formulate possible solutions and then participate in role-plays depicting these potential solutions. Researchers found children with SLI presented fewer potential solutions than NL participants. Further, children with primarily expressive language deficits outperformed children with receptive and expressive deficits in the role-playing activity. Authors suggests these are the results were partially related to different

approaches to problem solving employed by SLI children when compared to NL children. However, the argument can be made that those with expressive language impairment are different from individuals with a motor language disability. None of the participants in this study relied on external AAC devices.

Given that many demonstrations of conflict and conflict resolution are language based, the question becomes, what is the impact of limited language on the presentation of conflict and the conflict resolution process? If measurable impact exists how do individuals with CI compensate? How do individuals using external AAC devices approach conflict with peers?

Miscommunication, Conflict, and External AAC

Article II, Section 1 of the bylaws of the United States Society for Augmentative and Alternative Communication (USSAAC) describes communication as, “the essence of human life”. Light (1988) calls communication the means by which individuals achieve social closeness. Although spoken language may not be possible, external AAC supports users in forming and maintaining meaningful social connections (Light, 1997). While significant attention has been paid to creating technology that allows for accurate transmission of information, the necessity of social closeness has largely been neglected. Communication through AAC has proven beneficial to the families, friends, and caregivers of external AAC users, but can be more challenging than traditional forms or interpersonal conversation. Especially when the communication partner is unfamiliar with the individual using external AAC or their method of communication. In any communicative exchange, conversation partners risk misunderstanding. However, for

those who use external AAC devices, potential miscommunication is a constant concern for a variety of reasons.

Robillard, Mayer-Crittenden, Roy-Charland, Minor-Corriveau, and Bélanger (2013) studied the impact of cognition on a child's ability to navigate a speech-generating device (SGD) with dynamic paging. Dynamic paging devices have a screen that links to different pages with additional vocabulary. Fewer symbols are displayed on each page with links to additional pages offering a larger vocabulary set (Reichle & Drager, 2010). However, since many words and phrases are not visible on the first screen, users of SGDs with dynamic paging must learn to efficiently navigate through different screens in order to retrieve desired vocabulary. One's ability to do so will either result in increased communicative competency or reduced communicative efficiency (Light & Drager, 2007).

Researchers found the skills of sustained attention, categorization, fluid reasoning, were the most important skills necessary to successfully using dynamic paging technology (Robillard et al., 2013). Verbal working memory and visual special working memory were also found to be helpful. Furthermore, older children (6 years) were found to be more efficient than younger participants (4 and 5 years). It is important to note, this particular study included a small sample for the use of a stepwise regression statistical procedure (65 children ages 48-77 months) and researchers encourage further study with a larger sample size.

Difficulties navigating an AAC device under stressful circumstances could lead to frustration and communication breakdown. Thistle and Wilkinson (2012) posit the increased time necessary to create a message via external AAC requires more attention

than typical oral communication. As previously mentioned, individuals with communication impairments often experience higher levels of stress than non-CI individuals (Laures-Gore, et al., 2010; McCormack et al., 1997). In times of conflict, these emotions may negatively impact the cognitive processes (i.e. attention, categorization, fluid reasoning) required to successfully navigate an SGD and communicate via external AAC. Given the possible challenges of external AAC navigation, the exploration of the development of conflict and conflict resolution strategies among this population requires careful consideration.

Selecting a vocabulary set for external AAC is particularly challenging given the near impossible task of selecting vocabulary for every situation, activity, or ethnicity (Beukelman & Mirenda, 2005). Commercially constructed vocabulary sets often neglect adult topics such as secondary education, intimate relations, employment, and crime (Bornman & Bryen, 2013). Shewan and Cameron (1984) found that even communication partners of individuals using external AAC struggle to suggest an adequate vocabulary set to meet their conversation partner's needs.

Bornman and Bryen (2013) investigated the social validity of a vocabulary set used by South African victims of crime or abuse. Even though the sample was small, they found social validation of available vocabulary to be an effective means of ensuring stakeholder relevance. In this particular study, literate South Africans using external AAC determined the social validity of vocabulary within vocabulary sets identified by stakeholder focus groups. The literate external AAC users identified words they felt were important to include in the vocabulary set of SGDs specifically for illiterate South Africans. Of the 50 preselected words, 92% of participants identified two words as

important or very important: *forced* and *help*; 88% of participants identified *clothes*, *family*, *hurt*, *I/me*, *police*, *scared*, *touch*, *where*, *who*, and *woman* as important; and 75% of participants considered *angry*, *doctor*, *friendly*, *hit*, *inside*, *look*, *man*, *mother*, *please*, *sad*, *secret*, *shout*, *steal*, *stop*, *tell*, *toilet*, and *work* important (Bornman & Bryen, 2013, p. 178).

A three-year project conducted by Collier, McGhie-Richmond, Odette, and Pyne (2006), examined the sexual abuse experiences of individuals using external AAC. The results of this study found the majority of participants had experienced some form of abuse including sexual abuse. In addition, participants indicated they had little education concerning healthy or abusive relationships, little support communicating with justice systems or accessing services, and difficulty communicating about abuse in general. Of this Collier and associates (2006) state:

Some participants reported that disclosing and making formal complaints are major challenges for people who use AAC who may not have the vocabulary or language skills to deal with conflicts and to negotiate outcomes; the assertive skills and confidence to bring these matters forward; or the very knowledge that they are in an abusive situation. (p. 68)

Participants also describe the limited availability of resources to support them in dealing with relationship difficulties.

One strategy for communication between individuals using external AAC and typical speakers is the co-construction process. Since communication between these pairs requires more effort, both partners must work together in order for successful interaction to occur. Bauer and Auer (2009) call this the “collaborative principle” (p. 259). The

collaborative principle describes the responsibility of the speaking partner to support the individual with complex communication needs in the construction of meaning. This is especially important if the CI individual has a limited vocabulary.

A case study by Hormeyer and Renner (2013) examined communication patterns between a non-CI woman and Nina, a German woman with cerebral palsy and severe dysarthria. In order to communicate, Nina used a combination of communicative strategies such as small gestures and eye gaze, an external AAC device with eye tracking input and speech output as well as a grid-based dynamic interface. Nina had no hearing or visual problems and demonstrated good verbal comprehension. She had limited spelling ability and was not able to read. Researchers sought information as to the confirming or denying strategies Nina used when communicating with two familiar conversation partners. Results of this study found Nina used various techniques when endeavoring to confirm or deny a conjecture by her communication partner. Techniques include confirming with a singular nod, denying, confirming with strong nodding, and confirming with the use of an electronic communication aid (Hormeyer & Renner, 2013, p. 261). Further, researchers discovered Nina used her AAC device primarily for semantic information whereas body language was used for confirmations and denials. Confirmations occurred with greater frequency. Particularly noteworthy is the supposition that, even with typically speaking individuals, confirmations are *preferred* whereas disagreements are *dispreferred* (Hormeyer & Renner, 2013, p.268) and thus, are observed less frequently. Goodwin (1995) suggests this is also because denial of a conjecture may result in the co-participant searching for an entirely different

interpretation of meaning and may move understanding further away from the intended meaning of the speaker.

Although researchers have identified the need to provide support and advocacy for disabled individuals (Bornman & Bryen, 2013; Farrar, 1996; Sobsey, 1994), there is little research focused on conflict resolution behaviors and strategies employed by AAC users who use external devices. Perhaps this is due to the challenges faced by researchers who endeavor to study this particular group. In addition to the obvious communication issues, there is a wide range of physical and psychosocial differences among those using AAC.

Those who are conversing with an individual using external AAC must develop alternative strategies to interpret the messages of their CI speech partner. The non-CI individual often will assume additional responsibilities during the course of the conversation. This is especially difficult when two individuals, one using external AAC, endeavor to resolve conflicts. Conflict is often emotionally charged and researchers have found that in addition to the normal challenges one will face when working through conflict, difficulty speaking or an inability to speak causes tension (Laures-Gore, DuBay, Duff, & Buchanan, 2010; McCormack Et al., 1997). Those with CI often experience additional stress combined with diminished coping skills (Laures-Gore, et al., 2010; McCormack et al., 1997). Research focuses heavily on the co-morbidity of CI and other areas of cognitive impairment (Douglas, 2010; Baker & Cantwell, 1978), treatment and therapeutic support for those with CI (Diener, & Bischof-Rosario, 2004; Hustad, Jones, & Dailey, 2003; Anward, 2002; Tannock, Girolametto, & Siegel, 1992;), increasing accessibility and availability of technologies through the use AAC devices (Bornman &

Bryen, 2013; McNaughton & Light, 2013), preventing abuse (Collier, McGhie-Richmond, Odette, Pyne, 2006), or helping facilitate communication with family members, caregivers, and peers (Beukelman & Mirenda, 2013; Anderson, Baladin, & Clendon, 2011; McCormack, McLeod, McAllister, and Harrison, 2010; Pennington, Thomson, James, Martin, McNally, 2009; Sandberg & Liliedahl, 2008; Hustad, 2007; Ferm, Ahlsén, Björck-Åkesson, 2005; Goodwin, 2004; Simmons-Mackey, et al., 2004; Hengst, 2003; Marshall, 1998; Brinton, Fujiki, Spencer, & Robinson, 1997; Lindblom, 1990). There is limited research specifically examining the conflict resolution experience of those using AAC.

Individuals interacting with familiar communication partners develop an awareness of patterns of interaction. Researchers suggest: “patterns of confirming and denying may vary significantly depending on the individual who uses AAC, the communication partners, and the context, and purpose of the interaction” (Hormeyer & Renner, 2013, p. 269). Research in AAC has focused on many techniques within the co-construction process as well as differences in interaction depending upon the relationship between the individual with communication needs and their communication partner. However, noticeably absent from this body of AAC research is the impact of miscommunication resulting in conflict.

Conclusion

Chapter 2 provided a more holistic examination of communicative language through an exploration of verbal and alternative and augmentative communication. It examined the role of language in the development and resolution of conflicts and considered the potential impact of external AAC on this process. The chapter began with

a brief overview of language in communication; explored the connection between language, identity and empowerment; described the nature of communication impairment; explained alternative augmentative communication; and studied the role of typical language in the development and resolution of conflicts. Chapter 2 hypothesized the use of external AAC devices influence the development of conflict and the conflict resolution process; however, the impact of such devices, and the additional affect of the identity standards and empowerment needs of external AAC users is the subject of investigation.

The following chapter describes the research methodology and data collection practices governing this study. It begins with a brief overview of the historical foundations of phenomenology and moves to the philosophical tenets of the phenomenological approach to qualitative research. Terms such as subjective openness, intentionality, noema, noesis, epistemology, and ontology will be discussed, as will some of the different branches of phenomenology. These include hermeneutical phenomenology, interpretive phenomenological analysis, transcendental or descriptive phenomenology, and existential phenomenology. In addition, the following chapter will explain the rational for choosing the transcendental phenomenological approach as the research methodology for this study.

Chapter 3 also provides a description and explanation of the coding strategies used during the analysis of data. For this study, a modified Stevick-Colaizzi-Keen method of data analysis was employed (Moustakas, 1994). These coding strategies discussed include epoche, identification of significant statements, identification of meaning units, textural description, structural description, and identification of the

“essence” of the phenomenon (Creswell, 2007, p. 159). Finally, the specifics of data management and organization practices for this particular study will be discussed in detail. These include researcher bracketing, recruiting participants, data collection procedures, data management and organization, data analysis, and issues related to ethics and trustworthiness.

Chapter 3: Methodology

Methodology

This study sought to understand the conflict resolution experience of individuals who use external augmentative and alternative communication (AAC). According to Willis (2007), phenomenology emphasizes “consciousness, subjective understanding, or psychological understanding” (p. 173). The phenomenological approach uses multiple individuals who have experienced a similar phenomenon and focuses on the content of their experiences. According to Ball (2009), the content of one’s experience includes judgment, perceptions, and emotions. The researcher seeks to understand the reality of the participants without questioning whether or not their perception of reality is accurate. According to Munhall (2007), phenomenologists endeavor to understand what it was like to live the experience, rather than simply one’s reaction to the experience. The identification of experiences or perspectives is meant to increase individual and contextual understanding rather than a greater understanding of universal cognitive structures (Willis, 2007).

German mathematician and philosopher Edmund Husserl is widely considered the founder of phenomenology (Creswell, 2007; Strasser, 1965). Husserl believed in *subjective openness*. Subjective openness describes one’s ability to remain open to and aware of their reality and the connection between their actions and their perceived reality (Lopez & Willis, 2004). Of this Husserl (1970) stated, “Ultimately, all genuine, and, in particular, all scientific knowledge, rests on inner evidence: as far as such evidence extends, the concept of knowledge extends also” (p. 61).

A component of particular significance was Husserl's concept of *intentionality*. According to Moustakas (1994), "Intentionality refers to consciousness, to the internal experiences of being conscious of something; thus the act of consciousness and the object of consciousness are intentionally related" (p. 28). Intentionality includes the *noema* and the *noesis*. The noema describes the phenomenon that results from the object while the noesis is the object's underlying meaning (Moustakas, 1994). According to Moustakas (1994), "the 'perceived as such' is the noema: the 'perfect self-evidence' is the noesis" (p. 30). It is the uncovering of these textural and structural dimensions of the phenomenon that is crucial to intentionality (Moustakas, 1997).

The *epoche* was also of great importance to Husserl's treatise. The epoche describes the stage of the research process whereby preconceptions, judgments, or biases are identified and set aside (Moustakas, 1994). Subsequent phenomenologists call this suspension of preconception, *bracketing*. Although Husserl espoused the importance of disqualifying previous knowledge and experience, the epoche does not remove all attitudes or knowledge. Rather, the epoche encourages the researcher to create space for new meaning and insight, free of the burden of bias and what Moustakas (1994) called, "voices from the past" (p. 85).

During Husserl's time, the foundational underpinnings of phenomenology were widely criticized as a viable research methodology (Moustakas, 1994). In spite of condemnation from many of his contemporaries, Husserl continued to expand his ideas, as did later researchers including Heidegger, Sartre, and Merleau-Ponty (Spiegelberg, 1982). Within the phenomenological approach, several branches have been identified.

These include hermeneutical phenomenology, interpretive phenomenological analysis (IPA), transcendental or descriptive phenomenology, and existential phenomenology.

Hermeneutics examines our understanding of and engagement with the world around us (Dowling, 2005). Developed by Martin Heidegger, a student of Husserl, hermeneutics extends beyond descriptions of life experiences to the exploration of the meaning rooted within common life practices (Lopez & Willis, 2004). Thus, the focus of inquiry extends from the experience of being to the experience of being in the world (Hein & Austin, 2001). Heidegger (1962) described the connection between an individual's reality and the influence of the social systems surrounding them as their "lifeworld". Creswell (2007) and Moustakas (1994) characterized hermeneutical phenomenology as an approach to research whereby the researcher interprets and translates the experiences of participants into essential elements that are latent within a collective experience.

There are many similarities between hermeneutics and IPA. For example, both share a belief in the significance of researcher interpretation. However, IPA combines the interpretive element with an aspect of analysis and considers the analyst central to making sense of participant experiences (Smith, 2004). Thus, IPA seeks not only to identify the meaning of individual experiences within a greater social context, but also endeavors to interpret and analyze the causes for the behaviors that ultimately shape individual experiences. Psychologist Jonathan A. Smith is a primary figure in IPA. He described this double-hermeneutic approach to research in the following way: "The participants are trying to make sense of their world; the researcher is trying to make sense of the participants trying to make sense of their world" (Smith & Osborn, 2008, p. 53).

Pringle, Drummond, McLafferty, and Hendry (2011) called this participant behavior the “sense-making activity” (p.21).

IPA generally engages in an idiographic exploration of data. An idiographic approach focuses on deep exploration of individual cases rather than the collective experiences of a larger population (Smith & Osborne, 2007). This case-by-case approach differs from other forms of phenomenological analysis where the researcher examines the shared experiences of several members of a given population and draws more generalized conclusions. Thus, IPA is sometimes considered more useful in individual psychological or therapeutic analysis or the fields of healthcare research and treatment (Green, 2011).

Hermeneutics and IPA, as well as subsequent evolutions of phenomenological research, demonstrate dissimilarities from Husserl’s original work. While descriptive phenomenology seeks to “bare witness” to participant experiences it is the active role of the researcher that ultimately brings meanings “into the light” (Pringle et al., 2011, p. 20-21). One of the key differences between these approaches and transcendental or descriptive phenomenology is the researcher’s handling of bracketing (Connolly, 2010) or what Husserl called the epoche (Moustakas, 1994). Transcendental phenomenology requires the researcher to rule out their own experience in order to examine experiences objectively (Moustakas, 1994). Through bracketing, the researcher identifies the significance of their own experiences in an effort to circumvent individual preconceptions, biases, and judgments.

Conversely, both hermeneutics and IPA suggest such bracketing is impossible since the researcher cannot dismiss beliefs or ideas since they are a part of the researcher (Connolly, 2010). Therefore, the researcher can only be aware of their existence in order

to minimize their impact on the study. In interpretive phenomenology, the experiences of the researcher are as important to the interpretation of the data as the data itself (Lopez & Willis, 2004). Although the researcher seeks to set aside judgment, the researcher cannot help but interpret information within the context of his or her own pre-understandings and experiences (Green, 2011). Gadamer (2004) described this process as a “fusion of horizons”. Of this he said:

All that is asked is that we remain open to the meaning of the other person or text. But this openness always includes our situation the other meaning in relation the the whole of our own meanings or ourselves in relation to it...this kind of sensitivity involves neither “neutrality” with respect to content not the extinction of one’s self, but the foregrounding and appropriation of one’s own fore-meanings and prejudices. The important thing is to be aware of one’s own bias, so that the text can present itself in all its otherness and thus assert its own truth against one’s own fore-meanings. (p. 271)

An additional area of note within phenomenological research is the existential phenomenological approach. Existential phenomenology is an amalgam of existential psychology and phenomenology (Tiryakian, 1965). It moves beyond both the phenomenological espousals of both Husserl (consciously being) and Heidegger (consciously being in the world) to aspects of human existence (Hein & Austin, 2001). Perhaps the greatest difference between existential phenomenology and the earlier works of Husserl is the notion of interpretation. According to Husserl, data yields a singular interpretation. Conversely, existential phenomenologists suggest data may be interpreted in myriad ways (Hein & Austin, 2001).

Epistemology and ontology are two concepts that are important to qualitative research. Ontology explores “the nature of reality” suggesting reality is subjective (Willis, 2007, p. 9). Data obtained demonstrates the “perception of participants” (Creswell, 2007, p. 17). Epistemology explores “what we can know about reality” (Willis, 2007, p.10). It places more emphasis on the relationship between the researcher and the subjects than ontology in that the researcher seeks to become an “insider” (Creswell, 2007, p. 17). Conversely, an ontological approach allows the researcher to gain an understanding of the participant’s experience through the participant’s description of those experiences.

In this study, it would have been impossible for me to become an insider. The participant’s experience is far too unique. I have communicated and continue to communicate verbally. I have never had an experience that has rendered me non-verbal nor do I have first hand experience with external AAC use. For this work, I sought to understand “how” participants experienced certain situations rather than analyzing “why”. Thus, the transcendental approach was a more appropriate research methodology. Transcendental phenomenology allowed me to explore the meanings alive within the experiences of individuals using external AAC devices in order to uncover the essences of the participants’ lived experiences.

In order to uncover the essence of the phenomenon (Creswell, 2007, p. 170), coding strategies were employed. The coding of data followed the modified Stevick-Colaizzi-Keen method outlined by Moustakas (1994). Coding strategies included the following:

- Epoche or personal bracketing

- Identification of significant statements
- Identification of meaning units
- Textural description
- Structural description
- Identification of the “essence” of the phenomenon (Creswell, 2007, p. 159)

As previously mentioned, the epoche offers the researcher the opportunity to explore his or her experiences with the phenomenon in an effort to identify and set aside preconceptions. The researcher is then fully available to participants, and fully open to understanding their experiences. Following the bracketing stage, the researcher examines data from participant interviews to identify *significant statements*. According to Creswell, (2007), the researcher, “finds statements about how individuals are experiencing the topic, lists these significant statements and treats each statement as having equal worth, and works to develop a list of nonrepetitive, nonoverlapping statements” (p. 159). The organization of these statements is called horizontalization (Creswell, 2007).

Following horizontalization, these statements are then grouped into larger *meaning units* or themes (Creswell, 2007). The *textural description* includes verbatim examples of participant experiences. The textural description explores “what” happened, while the *structural description* explores “how” it happened (Creswell, 2007) and “how” participants experienced “what” they experienced (Moustakas, 1994). Through this coding procedure, the researcher incorporates both textural and structural descriptions of participant experiences to identify the essence of the phenomenon.

Bracketing

I approached this project as an opportunity for a deeper understanding of the conflict resolution experiences of those communicating solely through external AAC. As a professional school counselor, I have had the opportunity to work with students who endeavor to navigate social challenges via non-traditional communicational means. As a result, this area was of particular interest. Although I found the social and emotional needs of AAC using students similar to their verbally communicating peers, they faced additional difficulties when communicating with those unfamiliar with AAC.

The AAC users with whom I worked were the same chronological age as their classmates. Likewise, they shared similar social and emotional needs. Nonetheless, non-AAC using peers and adults frequently underestimated their cognitive ability and emotional intelligence. Due to mobility and motor challenges, those using external AAC were often perceived as individuals in need of assistance and support. Frequently non-AAC using peers took on a caretaking role rather than that of a friend. Many times this was a source of frustration to those using AAC who would seek support in communicating to non-AAC using peers they were “not little kids”.

One on one communication between AAC users and non-users also differed from typical verbal interaction. Since external AAC in conversation often created additional wait time, the rhythm of conversational turn taking was unfamiliar and sometimes uncomfortable. In a larger social context, discussions between non-AAC using students would move quickly and AAC using students were unable to keep pace with conversations. While external AAC users were not consciously excluded, this quick pace of verbal interaction often resulted in their social isolation. Thus, they engaged in

conversation with adults more frequently than with peers. Even in my communication with AAC using students, I found that I too would become uncomfortable with the length of the silences and pauses in an exchange and would attempt to rescue the dialogue by offering options that required closed responses.

In spite of differences in communicative style, in times of conflict, I would approach a problem-solving meeting in much the same way I would for non-AAC using individuals. These meetings would follow the Win-Win guidelines whereby each participant delivered an “I” message that was validated and reflected by the other participant (Drew, 1995). The goal was to identify the problem and develop a resolution that placed responsibility on both participants. However, in addition to working through the message the AAC using student wanted to send, we would also discuss how best to transmit the information to the non-AAC using peer. This would sometimes be in the form of a note or a phrase programmed into a SGD. On other occasions the AAC user would engage in a one-on-one dialogue with the non-AAC user. In these cases I would not transmit their message, but rather support their interaction.

I found successful communication with an individual using external AAC devices required more of me as a listener than my engagement with non-AAC using students. First, body language often presented differently given physiological challenges. Additionally, during times of emotional unrest, these students sometimes found communication even more difficult as muscle tension related to anger or frustration made using the SGD more difficult. Perhaps the most profound physical signs of relief resulted not from agreement, but from understanding.

Since I did not share the experiences of external AAC users, during the *epoche* stage of the process, I needed to identify preconceptions, judgments, or biases and set them aside (Moustakas, 1994). One assumption in particular was my assumption that individuals who were unable to communicate verbally would experience a greater level of frustration when communicating and this frustration would increase during times of conflict. This conjecture was based on my experience as a life-long verbal speaker who relied primarily on verbal language and pragmatic behavior for most interpersonal communication. Thus, communication through a different means seemed daunting and potentially frustrating. I presumed individuals who communicated solely through external AAC devices, had an underlying desire to communicate verbally, and thus felt an additional level of vexation. In addition, as a professional counselor, it was important that I remained mindful of any assumptions resulting from therapeutic assessments of the origins of the participant behavior. Perhaps most importantly, I needed to abandon the notion that communication through text alone could not yield rich, meaningful data and that words in the absence of body language could not convey a full message. This included my willingness to consider different ways in which to interview individuals who communicate via external AAC. In order to approach this research free of biases and preconceptions, it was necessary for me to bracket and set aside the aforementioned beliefs prior to embarking on data collection and analysis.

Participants

For this study, a purposeful sampling technique was used. In a purposeful sampling approach the researcher to selects specific individuals or sites for the purpose of gaining an understanding of the central phenomenon of the study (Creswell, 2007).

After obtaining approval from the Nova Southeastern University Institutional Review Board, I contacted site directors of social service agencies providing support to individuals with oral motor issues who use external AAC devices. These agencies included United Cerebral Palsy (UCP) of Northern, Central, and Southern New Jersey, UCP of Philadelphia and Vicinity, Centers for Independent Living, the Assistive Technology Advocacy Center (ATAC) of New Jersey and Pennsylvania, and Pennsylvania's Initiative on Assistive Technology (PIAT). Greeting/informational letters and study flyers were sent to the site directors at each of the aforementioned locations. The documentation provided information about the study and requested permission to share information with potential participants through a printed flyer. In addition to a description of the study, the flyer included my phone number and email address. Although director response was positive and flyers were posted at each site, after two weeks, there were no inquiries from potential participants.

The lack of response was disappointing for a number of reasons. First and foremost, the unique qualities of this population made locating participants quite challenging. With no response from participants at any of these local community agencies, I was unsure how to proceed. Second, while expansion of the research area became a necessity, potential geographical limitations made a face-to-face interview far more challenging. It became immediately apparent that in order to obtain a rich body of data, a different approach was necessary. I then moved to a more opportunistic sampling strategy.

According to Creswell (2007), an opportunistic sampling approach allows the researcher to, “follow new leads and take advantage of the unexpected” (p. 127). Since

members of the external AAC using population are already familiar with and reliant on existing technology, it was necessary to move toward a method of recruitment more applicable to on-line settings (Stewart & Williams, 2005). Consequently, I began seeking participants through more social means rather than focusing community agencies providing clinical or therapeutic support.

Information about the study was then posted to social media. This included two Facebook groups dedicated to AAC users and two listserves for AAC users, their family members, and therapists working specifically with this population. Participants were not directly approached, rather information about the study was posted and interested participants were asked to contact me via email. This yielded three potential participants. Although each agreed to respond to interview questions, all three participants requested the question be forwarded to them via email. As previously mentioned, individuals who use external AAC devices often have additional physical limitations that may make responding to questions more time consuming. Each participant sought to provide careful and thoughtful responses. Since their communication is entirely through written text, participants considered their email responses equal to that which would be provided in a face-to-face interview. Thus, responses to open ended questions were considered data. In addition, all participants agreed to maintain correspondence with me in order to answer any follow up questions.

Based upon the positive response to social media, emails (Appendix G) with study information were sent to twenty external AAC users who actively blogged about their experiences. They were asked to respond directly to me via email if they had any interest in participating in the study. Those who responded were provided a link to a 14-

item questionnaire (Appendix D) and invited to continue correspondence with me via email. While this method of collecting interview data was somewhat different from what I had initially anticipated, I set aside the preconceived notions of what an interview “should” look like as part of the epoche stage of research.

This opportunistic sampling technique ultimately identified 10 individuals (five women and five men) who use external augmentative and alternative communication devices. Of the ten, three declined to participate, and one did not meet study criteria. The remaining participants were five men and one woman. All were between the ages of 18 and 45, were non-verbal, and relied exclusively on external AAC. Two participants were married, three lived independently with assistance from caregivers, and one resided with a family member. Five participants had attended and graduated from college, three had gone on to earn master’s degrees. Of those interviewed, four participants were diagnosed with cerebral palsy (CP); one, spinal muscular atrophy (SMA); and one suffered a stroke.

Four participants had no previous experience as verbal speakers, one participant, although physically disabled, was previously able to verbally communicate, and one individual was verbal with no significant diagnosis prior to a traumatic health event. None of the participants had any receptive or expressive language deficits beyond motor issues related to speech production. The levels of physical mobility varied greatly from significantly physically disabled to primarily motor speech impacted. Since the diagnoses of participants varied in type and presentation, methods of communication through external AAC also varied greatly. Two participants used the thumb, two the index finger, one participant the big toe, and another the chin.

Interview

Participants were asked to answer two demographic and twelve open-ended questions. Demographic questions included gender and whether or not they were life-long AAC users. I did not ask further detail about the participants' health conditions or diagnoses; however, all participants offered this information in their open-ended responses. Open-ended questions explored the participants' perceptions of identity, empowerment, and conflict. It is unclear how long it took each participant to complete the written responses. Of the six participants, five agreed to answer follow up questions via email and remained in communication with me for several weeks after the initial correspondence. Through these follow up questions, I attempted to uncover additional information based on themes that had been identified during the initial data analysis.

Participants were assured their identity and responses would remain confidential. Since all correspondence was in written format, there were no audio recordings. In order to track data, participants were numerically coded with all interview information, email correspondence, and related documentation stored in separate electronic folders. All electronic folders were stored on a password-coded computer. I was the only individual with access to the computer password and data. Participants were informed all information collected for this study would be archived for three years and then destroyed.

Procedure (Data Collection)

This study followed a qualitative process that examined six individual interviews. Given participant familiarity with technology and an electronically based environment, communication between participants and myself was both synchronous and asynchronous (Stewart & Williams 2005). Synchronous communication is that which occurs in real-

time such as interactive discussion or chat groups or any real time video communication. Asynchronous communication includes non-real time interaction such as web-based discussion boards, email correspondence (McLaughlin, 2005), newsgroups, or subscription lists (Stewart & Williams, 2005).

Interviews were initially conducted via email in an asynchronous format. Respondents were provided a link to a confidential questionnaire with two demographic and twelve open-ended questions. Following my examination of the questionnaire responses, participants were contacted via email and invited to answer follow up questions. Five participants agreed to continue correspondence. These follow up questions took place in a synchronous electronic environment via Skype and/or instant messaging as well as an asynchronous email format. Questions were developed following data analysis on both macro and micro levels.

Initially, a purposeful sample technique was used whereby individuals who shared a particular characteristic were approached to participate in this research (Creswell, 2003). Sampling for this study evolved to an approach that was more opportunistic through various forms of social media and synchronous and/or asynchronous communication (Stewart & Williams, 2005). Participants voluntarily provided informed consent through their response to a direct link to the initial questionnaire as well as through continued email correspondence with the primary investigator. Since all correspondence was text-based, no audio recordings were created.

Data Management and Organization

Interview questions included two demographic and 12 open-ended interview questions specific to the conflict resolution experiences, identity standards, and

empowerment needs of individuals who use external AAC devices. Demographic questions included (1) are you a life-long AAC user? And (2) what is your gender? Open-ended questions included:

- Identity describes how we see ourselves and how others see us. What three words would you use to describe yourself?
- As an external augmentative and alternative communication user, what is it like communicating with those who are unfamiliar with external augmentative and alternative communication?
- Tell me about your augmentative and alternative communication device and its strengths and weaknesses.
- How has your device affected your life?
- Do emotions (happiness, sadness, anger, etc) impact communication? Why or why not?
- In your experience, can listener misunderstanding result in conflict?
- How do you handle this?
- In your opinion, does conflict make communication more difficult? Why or why not?
- How do you go about solving a problem with a co-worker, friend, partner, or family member?
- How does your relationship with the other person impact problem solving?
- What words describe what conflict is like for you?
- How has conflict affected you?

The Flesch-Kincaid Readability Calculator provides information as to the reading level of text. Based on this measure, interview questions were given readability level of grade 8.8 (Readability Score, retrieved November 9, 15). All study participants were high school graduates, some possessed undergraduate and graduate degrees. Participants did not indicate any misunderstanding of interview questions or subsequent follow up questions. Based on this, it was my assumption that participants had a sufficient understanding of each question.

The research questionnaire was created after an extensive review of literature yielded no reliable measures of the conflict resolution experiences of individuals who use external AAC devices. Questions 3 and 4 examined the beliefs surrounding identity, questions 5 and 6 looked at empowerment wants and needs. Questions 7, 8, 10, 11, and 12 examined the concept of conflict in broad terms. This included communication, miscommunication, the impact of relationships, and the conflict experience as a whole. Finally, questions 9, 13, and 14 support the foundations of phenomenology through the exploration of the personal experience of external AAC users. The goal of the questions was not to determine the merit of the participants' statements, but rather to capture the meaning within these experiences.

To manage and analyze data, a coding system was developed. Participants were distinguished from one another using numbers from 1 to 6. For the ease of analysis, these codes were later replaced with pseudonyms. Participant responses were transcribed into six separate Word documents and electronically filed into separate participant folders. From the transcripts, twelve additional Word documents were created, one for each interview question. In addition to transcriptions and interview questions, Word

documents were created to document additional data obtained from follow up questions. This information was placed in both the individual participant folders as well as a new folder entitled “Follow Up Questions.”

To organize and analyze data, Word documents were highlighted to identify different types of responses. Yellow denoted positive/empowering responses while red was used to identify more negative responses. In addition, words used to describe a particular experience were grouped according to the positive or negative connotation of the term. NVivo software was used to examine data for recurrent phrases or terms. The use of this software reduced the likelihood of missing pertinent themes due to human error.

Through NVivo, I was able to identify repetition of specific words or phrases, and organize themes and highlight significant statements. For example, the word “communicate” or like forms, was used 85 times. NVivo has a *query* function designed specifically for pattern identification. This allows users to quickly and accurately identify clusters of meaning. Through the identification of repeated terms and phrases, I was able to identify specific areas of interest as well as any additional meaning within participant responses. Through the combined use of manual and computer based analysis, I was able to uncover additional meaning that might otherwise have been missed using only one analysis method. The subsequently identified themes were validated through participant responses. Finally, participant responses were compared for each research question.

After compiling data and identifying themes, I reviewed all pertinent literature regarding conflict, miscommunication, identity, empowerment, and AAC. Through this review of literature, I was able to identify any connections between participant responses

and existing research that might have initially been missed. Conversely, differences in participant responses and existing literature were also identified for further exploration.

Within relationships, miscommunication resulting in conflict is a reality for all individuals regardless of their ability to verbally communicate. This study sought to gather information about the cause of conflict among individuals using external AAC devices, whether or not external AAC use results in miscommunication creating conflict, the impact of external AAC on typical emergent conflict, as well as the impact of identity standards and empowerment needs on the development of conflict and conflict resolution experience of the individual using external AAC. Communication impairments are diverse in presentation and severity; however, participant experiences with external AAC represent a shared experience. With this in mind, a transcendental phenomenological approach was the most appropriate research methodology.

Data Analysis

When I believed I had reached the point of data saturation, I began to compile the data obtained from participant interviews and follow up questions. As previously mentioned, this included a detailed organizational system whereby data was sorted and stored for analysis. When data management and organization had been satisfactorily completed, I began the coding process. Coding strategies included the following:

- Epoche or personal bracketing
- Significant statements
- Meaning units
- Textural description
- Structural description (Creswell, 2007, p. 170).

Finally, the information collected was coded in order to uncover the *essence* of the phenomenon (Creswell, 2007, p. 170). Since I did not share the experiences of external AAC users, during the *epoche* stage of the process, and preconceptions, judgments, or biases were identified and set aside (Moustakas, 1994). This bracketing included setting aside the assumption non-verbal communication would be more frustrating in the face of conflict and could contribute to misunderstanding leading to conflict. Additionally, I bracketed out the notion non-speakers had an underlying desire to speak verbally. Finally, I suspended the notion that a conversation could only take place when individuals were face-to-face.

Following the *epoche*, I began *phenomenological reduction*. In this stage, I moved beyond the bracketing of assumptions, to the culling down of participant experiences to their most basic features. According to Moustakas (1994), it is within these separate elements that one may discover the underlying phenomenon. During this stage, I eliminated repetitive words and redundant statements and described observable behavior using rich, textural language. Not only did I attend to the details of the experience, but also I was open to and aware of the experience within the experience. However, throughout this process, the focus remained on the “object” (Moustakas, 1994, p. 91) rather than my idea of the object. Husserl (1931) suggests phenomenological reduction “takes on the character of graded prereflection, reflection, and reduction with concentrated work aimed at explicating the essential nature of the phenomenon” (p. 114). In order to accomplish this, I made a conscious effort to consider each experience in its singularity (Moustakas, 1994). From the significant statements within the data, I was able to identify clusters of meaning (Creswell, 2007). These statements and themes were

subsequently used to describe the “what” of participant experiences (Creswell, 2007). This *textural description* included word for word examples taken from responses to interview questions.

The next step in this process was *imaginative variation* or what some researchers call, the *structural description* (Creswell, 2007). Moustakas (1994) posits the primary undertaking of imaginative variation is the “description of the essential structures of a phenomenon” (p. 98). Here I moved beyond the individual units of participants experiences and searched for possible meanings within an experience. I moved beyond the “what” of the experience, to the “how” (Moustakas, 1994). This was accomplished through the exploration of varying perspectives, alternative frames of reference, and different roles or functions. In addition, I used my imagination to uncover conceivable meanings (Moustakas, 1994).

Frequently this process is accomplished through the keen observation of signal-independent behaviors (Keintz et al., 2007) such as gaze, body movement, and gesture (Keen et al., 2005; Pennington et al., 2009), as well as signal dependent behaviors of tone of voice, and rate of speech. However, with individuals using external AAC devices, the nature of their diagnosis often impacted their physical presentation. Thus, these signal independent behaviors did not hold the same semantic and semiotic meaning as they might for a verbal speaker. However, they were often present within the written text. These included use of punctuation as well as symbols that mimicked facial expressions.

Through a thorough examination of significant statements, and both textural and structural descriptions, I was able to uncover the essence of participant experiences. This coding analysis focused on the impact of identity standards and empowerment needs on

conflict development and resolution, miscommunication contributing to conflict, conflict resolution processes, and the meaning of conflict to those using external AAC devices.

Ethics

Participation in this study was strictly voluntary and participants were free to leave the study at any time. Professional ethics with regard to research with human subjects was consistently observed. While my position as an educator in the state of New Jersey offered the opportunity to locate study participants through professional means, all requests for access were based solely upon my status as a researcher. Study participants had no connection to me personally or professionally. Ultimately, any professional connection was inconsequential as all participants were located through social media and none of the located participants were within my geographical area.

Prior to beginning any component of study, I obtained approval from the Institutional Review Board of Nova Southeastern. This approval was granted on April 23, 2015. Subsequently, study participants were sought. Potential participants were provided with an informed consent form indicating the purpose of the study as well as any known risks. An additional form was also designed for legal representative who may have been acting on behalf of potential study participants. Although this form had been created in compliance with IRB directives, participants in this study were considered to be of sound mind and were not lawfully bound to the decision-making oversight of a guardian or legal representative. In order to maintain confidentiality, all questionnaires, transcripts, instant messages, and emails were kept in a secure location. The identity of participants was kept confidential through a coding system and since no audiotapes were produced, there was no concern for participant identification through a SGD.

Trustworthiness

Kirk and Miller (1986) offer the following definition of qualitative research: “A particular tradition in social science that fundamentally depends on watching people in their own territory and interacting with them in their own language, on their own terms” (p. 9). Krefling (1990) posits subjective meanings and perceptions are critical components of qualitative research and it is the responsibility of the researcher to ensure access to both elements (p. 214). However, unlike the quantitative approach, qualitative research does not offer the same method of reliability and validity assessment (Krefling, 1990). Rather, qualitative researchers must use a different mode of study evaluation in order to assess the worth of a project, regardless of methodology.

Guba (1981) offers a useful model for the purposes of ensuring and assessing the merit of a qualitative study. This model is based on four areas of consideration relevant to both quantitative and qualitative research. However, Guba (1981) presents different assessment considerations for both research methodologies. The four aspects of trustworthiness include:

- a. Truth value
- b. Applicability
- c. Consistency
- d. Neutrality (Krefling, 1990, p. 215)

Truth value is the accuracy of research findings based upon the study participants and the context in which the study occurred (Guba, 1981). For qualitative purposes, the truth value is determined by the accuracy with which the researcher presents a subject-oriented illustration of participant experiences. For this study, I ensured truth value by

providing verbatim examples of participant responses. In addition, when participant responses required more contextual information, I offered additional information that might enhance understanding of participant responses. I avoided paraphrasing interview information and did not attempt to interpret the intention of the participant's message.

Applicability considers whether research findings may be applied to other settings, contexts, or groups. In qualitative research, the ability to generalize findings is not always relevant. Guba suggests considering the applicability of qualitative research refers to the *fitness* or *transferability* of findings to situations or contexts outside the study criterion. However, Guba (1981) felt this was the responsibility of the individual endeavoring to transfer the findings to other contexts, not the initial researcher. Rather, the initial researcher need only present detailed and descriptive data for possible comparison. If this is done, the applicability component has been sufficiently met (Lincoln & Guba, 1985). In this study, I spent a great deal of time with the participants and the interview data and subsequently provided extensive structural and textural descriptions of the data obtained from participant interviews

In the quantitative method, *consistency* refers to the consistency of the data were the study to be replicated under similar conditions (Krefting, 1999). However, in a qualitative approach, the researcher seeks to learn from the participants rather than controlling for them (Duffy, 1985). Thus, consistency in qualitative research refers to the ability of the researcher to identify the sources of variability. According to Krefting (1999), these variables might include: "increasing insight on the part of the researcher, informant fatigue, or changes in the informant's life situation" (p. 216). Of additional importance to qualitative research is the range of participant experiences rather than a

focus on the average experience. According to Krefting (1999), even outlying experiences are significant. For this research endeavor, I provided detailed information regarding all participant experiences. This was done in an effort to illuminate all participants' experiences rather than those that appeared to adhere to a particular paradigm of thought. Additionally, in the Limitations section of Chapter 5, I outlined all identifiable and potential threats to the validity of study and offered suggestions for future research.

Neutrality is the extent to which research findings are a product of participants and study conditions rather than researcher bias (Guba, 1981). Although quantitative research emphasizes the importance of the distance between the researcher and the participants, qualitative researchers endeavor to decrease the distance between themselves and study participants (Krefting, 1999). According to Lincoln and Guba (1985), the emphasis then shifts from the neutrality of the researcher to the neutrality of the data. Thus, they suggest neutrality is a bi-product of the firm establishment of truth value and applicability (Lincoln & Guba, 1985). In order to maintain researcher neutrality, I bracketed and set aside my own biases and preconceptions in an effort to openly experience participant data.

Conclusion

The previous chapter described the research methodology and data collection practices governing this study. It began with a brief overview of the historical foundations of phenomenology and moved to the philosophical tenets of the phenomenological approach to qualitative research. Terms such as subjective openness, intentionality, noema, noesis, epistemology, and ontology were discussed, as were some

of the different branches of phenomenology including hermeneutical phenomenology, interpretive phenomenological analysis, transcendental or descriptive phenomenology, and existential phenomenology. The previous chapter also explained the rationale for choosing the transcendental phenomenological approach as the research methodology for this study.

Chapter 3 also provided a description and explanation of the coding strategies used during the analysis of data. For this study, a modified Stevick-Colaizzi-Keen method of data analysis was employed (Moustakas, 1994). These coding strategies discussed included epoche, identification of significant statements, identification of meaning units, textural description, structural description, and identification of the “essence” of the phenomenon (Creswell, 2007, p. 159). Finally, the specifics of data management and organization practices for this particular study were discussed in detail. These included researcher bracketing, recruiting participants, data collection procedures, data management and organization, data analysis, and issues related to ethics and trustworthiness.

Chapter 4 describes the results of this study. This description includes the identification of the units of meaning and primary themes derived from the data. The four primary themes identified were communication, education, empowerment, and conflict. Within these primary themes, several sub themes emerged. These subthemes include miscommunication, conflict, technology, independence, the “voice”, the “words”, and misunderstanding of wants, needs, and abilities. Based upon this, I suggest the essence of the conflict experience of those using external AAC is combating the misperception by those unfamiliar with external AAC devices.

Chapter 4: Findings

Analysis

This study was an exploration of the conflict behaviors, beliefs, values, and thoughts of individuals using external AAC devices and the impact of miscommunication on conflict development and resolution. This study also sought to examine the affect of identity standards and empowerment needs on conflict development and resolution. Finally, it endeavored to understand what conflict resolution means to those who use external AAC devices. Six individuals who rely exclusively on external AAC devices provided insight into this topic by answering approximately twelve open ended questions. Four of the six participants continued correspondence with the PI and provided additional insight and clarification.

The goal of this research was to capture, as much as possible, the lived experience of external AAC users. To that end, information collected was coded in order to uncover the *essence* of the phenomenon (Creswell, 2007, p. 170). Coding strategies included the following:

- Epoche or personal bracketing
- Significant statements
- Meaning units
- Textural description
- Structural description (Creswell, 2007, p. 170).

This coding analysis focused on miscommunication contributing to conflict, conflict resolution processes, the impact of identity standards and empowerment needs on conflict development and resolution, and the meaning of conflict to those using external AAC

devices. That data gathered from this study was intended to address an area of scholarship that currently does not exist within the conflict resolution literature.

Findings

The questions driving this study were developed with the supposition that the conflict experience of individuals who use external AAC would differ from that of non-AAC users largely due to the absence of verbal language but also due to the difference in communication style. Communication style includes the length of responses, timing of conversational turn taking, and the increased responsibility of the non-AAC using listener. Further, individuals who use external AAC devices often have physiological challenges that affect their motor movements. Therefore, they may present differently than non-AAC users making extracting meaning from body language, less reliable.

Through a detailed analysis of interview data, four main themes were identified: communication, empowerment, education, and identity. Together, these themes create meaning and highlight the essence of the lived experiences of this population (See Figure 1). Data obtained from this study suggests the essence of the lived experiences of external AAC users is not combating miscommunication but rather combating misperception. For our purposes, I define miscommunication as a breakdown of the communicative action verses an overall misunderstanding of the intention of the communication or communicator. I define misperception as a limited understanding or misunderstanding of the needs, abilities, and desires of the individual communicating via external AAC. This misperception often results from attributive error. Thus, for the external AAC user, combating misperception is inextricably linked to their ability to communicate.

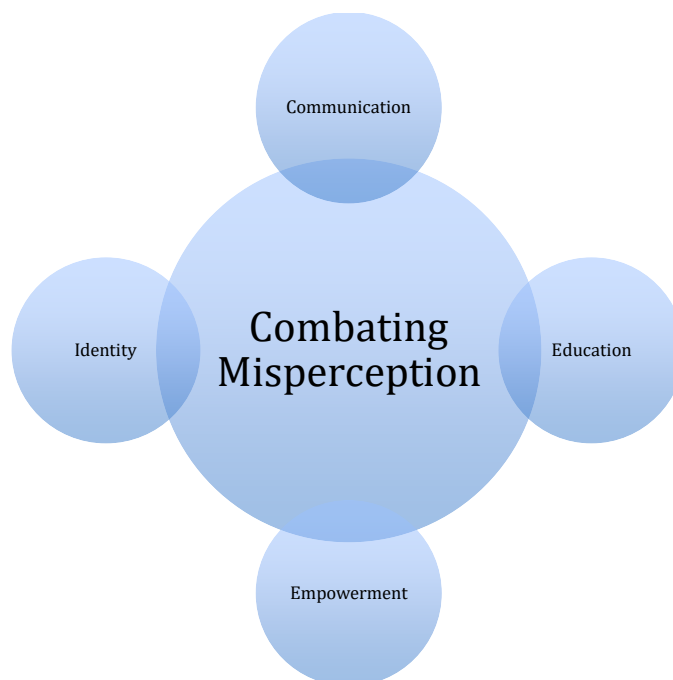


Figure 1. Diagram of Theme Overlap

Theme One: Communication

The idea of effective and accessible communication was a constant theme within the six interviews. The term “communication” or similar forms of “communicate” or “communicating” was mentioned 85 times. For these individuals, communication was certainly necessary for dealing with conflict, but likewise for empowerment, education, and identity. Access to communication allowed participants to fully engage in life in what they considered to be meaningful ways. These included building relationships, making and maintaining social connections, accessing educational opportunities, and achieving professional goals (See Figure 2).

Due to congenital diagnoses, four of the six participants relied exclusively on alternative augmentative communication throughout their lives. Since augmentative and alternative communication includes any form of communication other than verbal speech (ASHA, 2013), these participants are considered to be life long AAC users

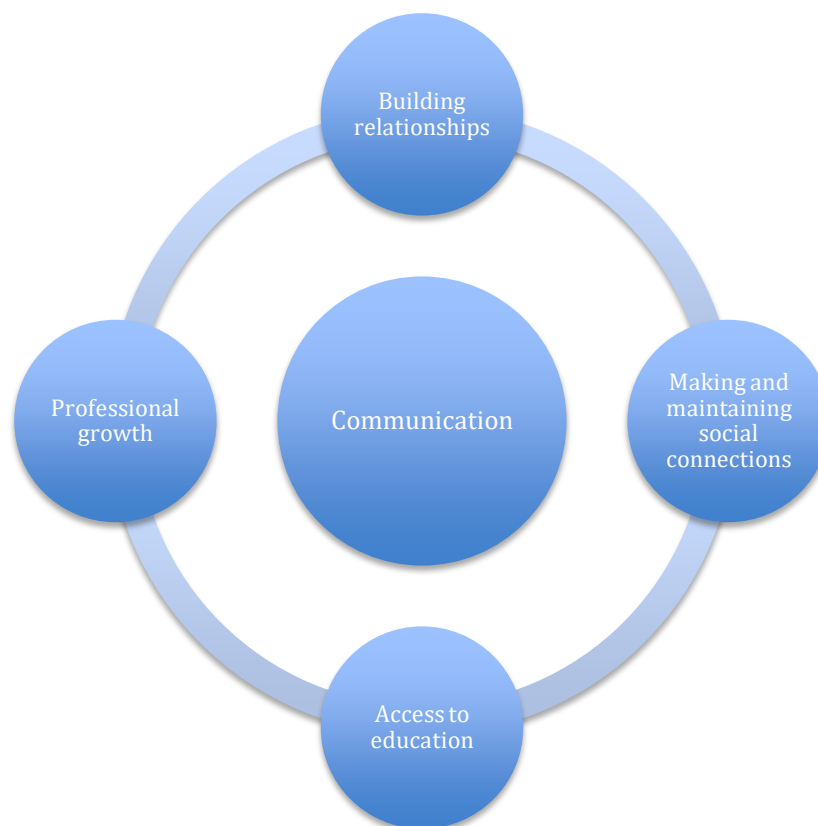


Figure 2. Diagram of the connection between communicative ability and social, emotional, educational, and professional access to life

One participant described the impact access to communication had on his life.

I was born with cerebral palsy. My disability affects my ability to speak so for the first six years of my life I wasn't able to express myself. The expectations for my life weren't very high. Augmentative alternative communication has changed my life. (Ben, Personal Correspondence, May 12, 2015)

For those who were once able to speak, the experience of verbal communication had varying levels of significance depending upon when verbal ability was lost and the quality of their speech at that time. Prior to using an external AAC device, participants often used other forms of AAC to communicate with the outside world. For some, the strategies used continue to be helpful even with access to external AAC. One participant

described the use of unassisted alternative communicative strategies based on semantic logicity (Hustad et al., 2007): “If I remember correctly I was able to speak a little before six. I slowly lost the ability. After that someone would go through the alphabet” (Ian, Personal Correspondence, July 23, 2015). Other participants also describe this process of using the alphabet to essentially spell out information. Using the alphabet describes using a signal for “yes” or “no” while the conversation partner recites letters of the alphabet until they reaching the starting letter of the intended word. This was most often used for very explicit, closed messaging and was very useful when communicating specific pieces of information or offering confirmation or denial of a direct question. Depending on the physical ability of the speaker, this occurred in different ways. For example, Leo would raise his eyebrows for “yes” and close his eyes tightly for “no” while Ian would click his tongue for “yes” and stick his tongue out for “no.” Another participant described his use of sign language. Sign language considered a form of non-external AAC.

I think I got my first communication aid when I was about eight. Before that I just used sign language. Obviously this was a very limited way of communicating, though. I think my first communication aid was called a Touch-Talker and it was pretty massive. I also remember being reluctant to use it. I can’t quite remember why. I just remember always giving my speech therapist a hard time. All I can remember is having to carry this suitcase around and then having to try to use it as well. I appreciated my speech therapist in the end. I think I only saw the benefits when I finally had a reason to use it. Such as in social situations when I couldn’t just rely on sign language. Thankfully technology has moved on since then. (Ken, Personal Correspondence, May 11, 2015)

Communication devices allowed participants to communicate longer, more detailed messages more quickly. Although there were only six participants in this study, five different SGDs were described. These devices ranged from iPads to Macintosh computers, to more complex SGDs. Each participant offered descriptions and opinions regarding the strengths and weaknesses of their devices. Strengths included the simplicity of the device and length of vocabulary sets while weaknesses included size of the system and quality of the voice. It appeared that the choice of devices was based on ease of use as well as personal preference. One individual chose to use a Macintosh computer. Of this he stated, “I use a Mac, it's stylish, approachable, and useful way beyond AAC applications” (Leo, Personal Correspondence, May 8, 2015). Another participant described a more involved AAC system designed specifically for those communicating through external devices.

I am using a Pathfinder, which is a Minspeak device. Minspeak is the best vocabulary system I have used in the 35 years I have been using AAC. It has sped up my communication by three times, which has helped me have fuller answers. It has also made conversations longer. (Ben, Personal Correspondence, May 5, 2015)

All SGDs allowed the user to store frequently used words or phrases and to categorize vocabulary sets. The speech prediction within the device decreased the time it took users to find specific terms and pre-developed language programs were developed for varying ages or abilities. Thus, participants could select and/or design language sets based on their individual communicative needs. In addition to personal and professional

requirements, some participants used technology specifically designed for unique physical needs. Of this one participant stated:

The only part of my body I have total control over is my chin. I have a computer with a special program that allows me to operate it with a custom made chin switch. The software is called EZkeys and I was one of the people chosen to work the bugs out. EZkeys is a scanning program with word prediction, abbreviations, and instant phrases. I absolutely love this program!! Steven Hawking, the physicist, uses this software. (Ian, Personal Correspondence, May 6, 2015)

When communicating, participants also indicated they used a combination of text-to-speech and text alone. Along with the description of the device, participants characterized using different modes of communication in different circumstances.

I use a Lightwriter in day-to-day communication. I think one of the main strengths is the fact that it has two screens so it is easier for the other person to read if they have to. This is especially useful in loud places or when I'm in a big group of people. I'd say that its main weakness was the fact that it still very expensive and very bulky to carry around. The voice could be slightly clearer as well. (Ken, Personal Correspondence, May 11, 2015)

Another participant described her need for a variety of communicative tools:

For me, having significant speech impairment means having a toolbox of various communication methods. That way I can mash together and switch out in a fluid manner, depending upon the situation and the needs in that moment. It truly is that simple. (Helen, Personal Correspondence, May 18, 2015)

Along with praise for the devices that offered communicative independence, there was also concern about the perception of those who were unfamiliar with external AAC devices and their function. One participant described this type of misunderstanding.

My device is an iPad running communication app. Most people see an iPad and don't take it seriously regardless of observing me using it to communicate. That's the weakness. The strength is its price as a total solution; iPad and accessories and software about \$800 rather than multi-thousands of dollars. (John, Personal Correspondence, May 4, 2015)

This description of the iPad was particularly striking since accessibility and the prevalence mobile technology was initially touted as a positive in terms of the overall acceptance of external AAC use (McNaughton & Light, 2013). However, in John's experience, it has caused some to see the use of an iPad as a luxury rather than a necessity. John called this the "Alec Baldwin" effect.

When Alec Baldwin was on a plane using his phone to play, what was it, Words With Friends? It became a big thing because he wouldn't turn it off. The problem for me is that people who don't understand and don't know I communicate entirely through my iPad, think I'm just using it to surf the web or play a game. They don't understand that if I turn it off, I can't communicate. (John, Personal Correspondence, May 4, 2015)

Participants also outlined characteristics they thought would be of additional communicative benefit. These included a wireless waterproof switch to operate the device allowing one to use their device in all weather conditions. Additionally, four of the

participants referenced the quality of the voice produced by the external device, describing it as both *monotone* and *robotic*.

I would love for there to be an improvement in the quality of the voice synthesizer that partners with the computer program I use. Surely, with today's technology, someone can develop a voice synthesizer that sounds like a human rather than a robot. (Ian, Personal Correspondence, May 16, 2015)

Another participant described the challenges of creating text that would be understandable when communicated through his SGD. "The main problem is trying to get the device to say things correctly. Sometimes I have to spell things differently or add punctuation in the middle of sentences so it breaks things up and make them easier to understand" (Ken, Personal Correspondence, May 12, 2015).

All participants indicated that without external AAC devices, they would not have the same quality of life. But they also described the challenges that accompanied communication. Most often these challenges occurred when endeavoring to communicate with non-AAC users who were unfamiliar with alternative and augmentative communication. Three of the six participants stated communication with those unfamiliar with external AAC was *somewhat difficult*, and a fourth described it as *very frustrating*. Of this, one participant stated:

Often people assume that I must be deaf as well as unable to speak so they write everything down instead. Or shout it at me. I'm too nice to correct them. Other people simply don't give me enough time to respond. (Ken, Personal Correspondence, May 11, 2015)

The difficulty corresponding with those unfamiliar with external AAC devices was also described by John, in the context of communicating with those in service professions: “Certain people who should be trained in dealing with a device user based on their job (police officers, hospital staff at all levels, etc), seem to fall short and treat me like less than a person” (Personal Correspondence, May 4, 2015). The desire to be recognized as a capable individual regardless of communicative ability, was echoed by all study participants. However, in their opinion, the mode of communication seemed to have little impact on the ability of the listener to understand the intended message. Rather, study participants felt non-AAC users needed only to demonstrate a willingness to learn about the AAC users’ method and means of communication to successfully engage in conversation.

Ultimately, participants viewed external AAC as their access to a full life.

Of this one participants says:

I don't believe I am where I am without communication. I don't have a college education or a master's degree without the ability to communicate. I'm not married without the ability to communicate. Communication is the key to living a full life. (Ben, Personal Communication, May 5, 2015)

An additional example offered by another participant: “Alternative augmentative communication has helped me mentally, physically, spiritually, socially, and financially. It has also given me a lot of independence” (Ian, Personal Correspondence, May 6, 2015). Yet another participant: “Without it (AAC), I wouldn't have a life, like I have now” (Helen, Personal Correspondence, May 18, 2015). Lastly, perhaps the most compelling

description of the significance of external AAC: “It makes my life possible” (Leo, Personal Correspondence, May 8, 2015).

Miscommunication Leading to Conflict

As previously described, this study was based on the supposition that alternative forms of communication could impact the verbal and nonverbal messaging thereby impacting the successful transmission of the communicator’s intended message. The subsequent “miscommunication” could effect not only the listener’s understanding of the message, but likewise create discomfort, upset, or possibly conflict. However, based on participant feedback, this was not the case. Rather, participants described the potential impact of miscommunication in general, not miscommunication specific to external AAC use.

You just have to ensure that you know how to communicate effectively so that it doesn't happen often. It's give and take really. You have to appreciate that they might not understand your situation and therefore you have to take that into consideration. (Ken, Personal Communication, May 11, 2015)

Ken went on to clarify, that *situation* described one’s position within a conflict, not one’s use of or need for external AAC. This opinion was present throughout the interview data. Miscommunication was experienced as a byproduct of the communication process as a whole, rather than an additional challenge exclusively attributed to AAC usage. When asked if miscommunication could lead to conflict, Leo stated, “Not necessarily conflict, but definitely awkwardness” (Leo, Personal Correspondence, May 8, 2015). Ben recognized the potential for conflict, but once again, on an overall communicative level.

Miscommunication can result in conflict, but it doesn't have to. I believe it really depends on the situation. For me, I don't know exactly what would result in conflict, unless it was a case where someone offended me in some way. (Ben, Personal Correspondence, May 5, 2015)

Another participant described the importance of effective communication. Again, this was not directly related to external AAC usage.

It depends on the situation. I always try to explain myself to the best of my abilities in every situation. However, if the other person created the conflict, it's a different situation. I might give him or her an explanation of why I am mad, or get a comment in, so they know I'm upset. (Helen, Personal Communication, May 18, 2015)

For the majority of participants, their approach to and experience with interpersonal conflict was very similar to that of verbal speakers. The role of external AAC in the development or resolution of conflict was infrequently mentioned. Only two participants referred to the presence of the device within an exchange. Leo stated that during a conflict he avoided using the text-to-speech function as often as possible, preferring instead to have his communicative partner read his response from a computer screen.

Five of the participants did feel that miscommunication overall, could potentially lead to conflict, but did not consider external AAC users as any more or less prone to this circumstance. Of this Ken stated, "It hasn't happened often but I think it can. But I wouldn't say that exclusively happens to AAC users. I think conflict can arise in any situation where someone is misunderstood" (Ken, Personal Communication, May 11, 2015). To this point, another participant indicated, "If two people are in a conflict and are

unable to get on the same page, it will definitely last a long time” (Ian, Personal Correspondence, May 6, 2015).

The only example of AAC usage leading to miscommunication resulting in conflict was also the most extreme. In addition, it highlighted to the effect of misperception on those using external AAC devices. When asked if miscommunication could result in conflict, one participant stated:

Yes it most definitely can lead to conflict. I have been assaulted before because I refused to give a security guard my device thus escalating to physical conflict. He started it and I did everything to explain this is how I communicate. (John, May 4, 2015)

Conflict

Prior to exploring the participants’ conflict experience with more in depth open-ended questions, they were invited to give three words describing what conflict means to them. The following words provided by participants: *awkward, difficult, deception, disturbing, embarrassing, false image, hostile, mad, prejudice, uncaring, and unsettling. Frustrating, stressful, and upsetting* were used by more than one participant (See Figure 3). Based upon participant responses, follow up questions were developed to gain a more in depth understanding of their experience.

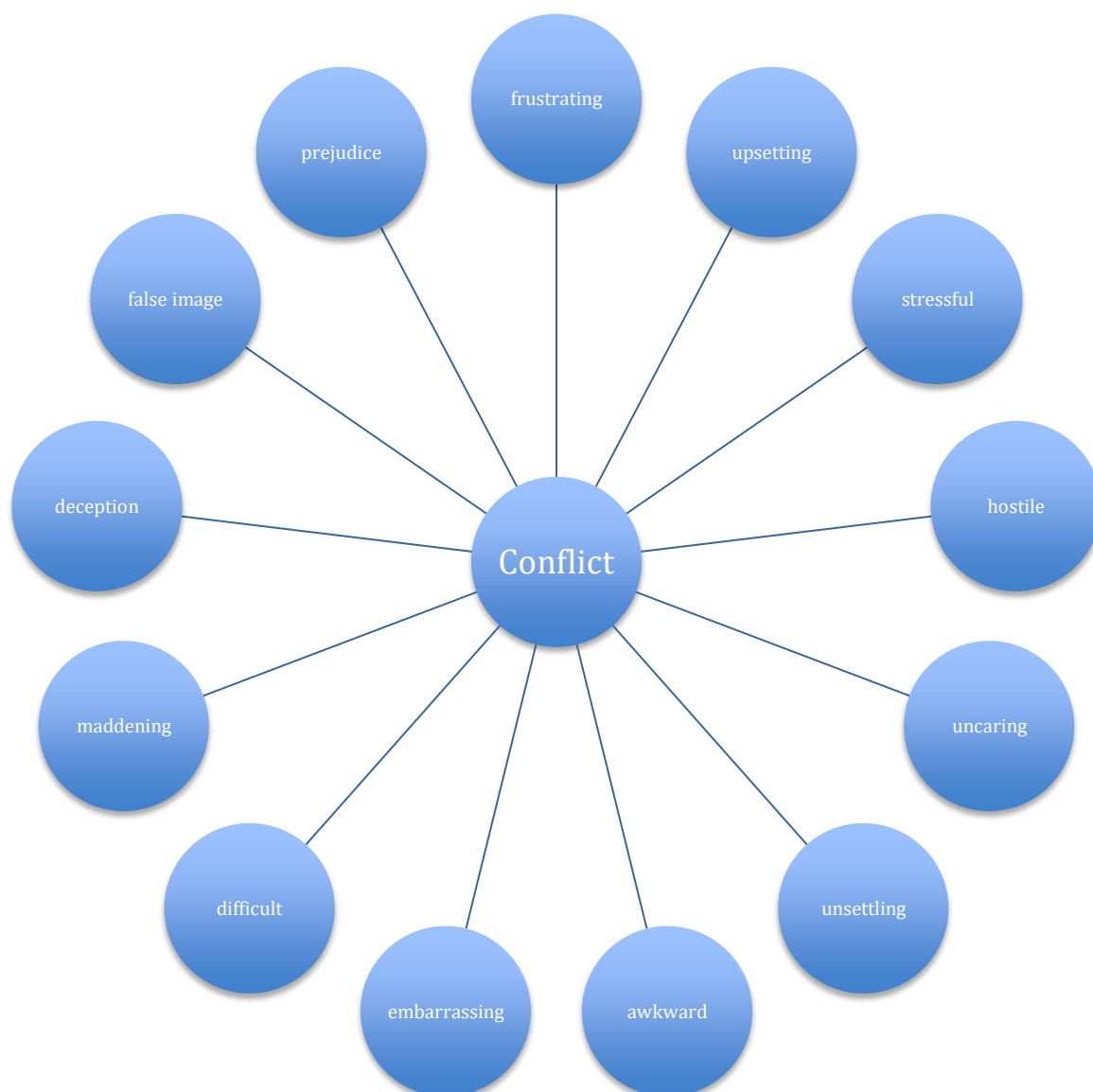


Figure 3. Words used by participants to describe “conflict”

The conflict experience of external AAC users was of great interest given the difference between their means of communication in comparison to non-AAC using peers. With the connection between communication and successful conflict resolution, the effect of external AAC on both the communicative and conflict resolution process was thought to be potentially significant. In the absence of verbal ability and differences

in body language, an external AAC device was thought to potentially impact many of the communicative qualities outlined in conflict resolution literature. Therefore, further exploration of words provided by participants was used to determine whether or not a relationship existed between their conflict experience and the use of external AAC devices.

While it was hypothesized the conflict experience would be different for external AAC and non-AAC users, this was not the case. Not only did external AAC users employ the same conflict resolution strategies as non-AAC users, they also minimized the impact of AAC in the development of typically emergent conflict or on the resolution of interpersonal conflict. In fact, some participants declared that conflict experience was essentially the same regardless of communicative method.

Sure, there are more things that an AAC user has to take into account, so the person might not get to say everything that they would like to say. I'm just saying conflict affects communication regardless if you use AAC. (Ben, Personal Correspondence, May 5, 2015)

Another participant explained his response to conflict in the following way:

I usually deal with conflict by listening to problem, apologizing for any misunderstanding or inconvenience, satisfying any request or demands or solving other problems and thanking said individual for bringing the issue to my attention so that I can improve. (John, Personal Correspondence, May 4, 2015)

Yet another participant felt conflict did in fact make communication more difficult.

However, the difficulty experienced was not directly related to external AAC, but communication as a whole: "If communication gets contentious, yes, it's more difficult.

Conflict results from a breakdown in communication” (Leo, Personal Correspondence, May 8, 2015). Upon further exploration, this participant went on to explain the difficulty was in connection to the emotions related to conflict, rather than the use of an external AAC device. Of this, another participant responded: “I think it (conflict) distracts from the communication and therefore makes it harder” (Ken, Personal Correspondence, May 11, 2015).

Two participants categorized conflict as something that *happens* to them. One participant described conflict in this way: “When conflict happens to me, I like to end it as soon as possible” (Ian, Personal Correspondence, May 6, 2015). Another participant, when describing a conflict he had experienced, stated: “He started it. I did everything I could to stop it” (John, Personal Correspondence, May 4, 2015).

Participants indicated any communicative difficulty did not stem from challenges related to device operation. Rather, communication was more difficult due to the specific qualities of the conflict. These included details of the conflict itself and/or the relationship with the other person involved in the disagreement. One participant described his behavior during conflict in the following way: “I fold like a cheap chair” (Leo, Personal Correspondence, May 8, 2015). He went on to say: “Oh, I tend to yield/avoid, I’m a giant sissy. :-p I mean, I’ll argue technology, politics, religion, I’m not scared of ALL conflict... just conflict that’s very personal” (Leo, Personal Correspondence, May 16, 2015). This participant also identified the differences in his approach to conflict resolution based upon his emotions as well as what he believed to be his position within the conflict. “If you’re mad at SOMEONE ELSE that confrontation is easy, if the person is mad at YOU, it’s not. If sorrow or sadness is involved, I don’t think

either party is eager to face it” (Leo, Personal Correspondence, May 17, 2015).

Although participants identified communicative differences between those who use external AAC and those who do not, all participants felt emotions impacted communication regardless of whether emotions were positive or negative. “Happiness, sadness, anger – they’re all universal emotions. They affect everyone’s communication” (Helen, Personal Correspondence, May 18, 2015). Participants also saw the expression of emotion as beneficial to communication. One participant stated: “We’re human beings, emotions factor into all aspects of communication” (Leo, Personal Correspondence, May 8, 2015). Another participant echoed these sentiments: “I believe emotions impact everybody's communication. It isn't just people who use AAC” (Ben, Personal Correspondence, May 5, 2015).

One participant described the emotions accompanying speech as “emotional data” (John, Personal Correspondence, May 4, 2015). Of this he stated: “Vocalizations of any kind carry emotional data and this data impacts actions on the other side of the interaction” (John, Personal Correspondence, May 4, 2015). Yet another participant highlighted the importance of emotion to the overall intent of the message: “You can convey what your words mean much more effectively if you display your emotions as well. This is especially important if you have a monotone voice like mine” (Ken, Personal Correspondence, May 11, 2015).

All participants agreed their relationship with the “other” influenced their approach to conflict. When asked about the affect of a relationship on conflict one participant stated:

How well you know the other person does make a difference because the more comfortable you are with the person, the easier it is to talk to the person. It's harder to resolve conflict when you don't know the person very well. (Ben, Personal Correspondence, May 5, 2015)

This participant went on to explain that familiarity with the other person was not necessary related to their understanding of external AAC devices, rather the dynamics of the relationship and the familiarity that existed between he and the other individual involved in the conflict.

Another participant echoed these sentiments, “The better that you know someone, the less likely that the conflict will escalate into something more” (Ken, Personal Correspondence, May 11, 2015). When asked about the difference in conflict resolution strategies based on relationship, another participant described the dynamic in this way:

You definitely respond to conflict differently depending on who the person is and how well you know them. Most definitely! And of course, you resolve conflict differently with different people. You'd say, use flirting with a lover, jokes with a friend... You'd try speaking more respectfully with a parent. (Leo, Personal Correspondence, May 17, 2015)

Three of the participants did not feel that conflict was a significant presence in their personal or professional lives. They referred to “conflict” as something that “could” happen, but was relatively infrequent. One participant shared the following opinion: “I have noticed that if you surround yourself with good Christian people, conflict rarely happens” (Ian, Personal Correspondence, May 16, 2015). When asked whether this belief came from an inner strength, a feeling of spiritual support, a belief in treating others in a

particular way, or something else entirely, Ian responded, “It’s all of those” (Ian, Personal Correspondence, May 16, 2015).

Theme Two: Empowerment

Empowerment is an important area of scholarship within psychological and community based research. The process of empowerment relies on a belief in one’s ability to make decisions and effect change on micro and macro levels. Individual empowerment is especially significant to disabled individuals who endeavor to achieve the same degree of social, educational, and professional access as non-disabled peers. One of the goals of this study was to determine the impact of empowerment needs on the development of conflict and/or conflict resolution. However, consistent with research, the translation of what empowerment means presented differently for different individuals and across various settings (Wehmeyer et al., 1997; Simon, 1990; Zimmerman, 1990; Conger & Kananga, 1988, Solomon, 1987).



Figure 4. Components of “empowerment”

Technology

All participants considered assistive technology a key component to living a full and meaningful life. Through technology, they were empowered to make choices, develop relationships, and fully interact with the world around them. One participant suggested the ability to talk was more valuable than the ability to walk:

One morning, many moons ago...back in high school, while I was wheeling past the school office on my way to class, the guidance counselor happened to be in the hallway and asked, "Helen, would you rather be able to walk or to talk?" Some people might find that question insensitive or even offensive. I found it sincere and genuinely interested. To the counselor's question, I immediately uttered, "talk" and continued, unfazed, on my way to class. (Helen, Personal Correspondence, May 20, 2015)

Access to technology provided participants with an otherwise unavailable opportunity to communicate with the world. One participant expressed the positive impact external AAC had on his life:

As you can see, alternative augmentative communication is extremely important in my life. It has not only given me a way to express my feelings and emotions. It has also given me a way to become an educated and productive citizen. (Ian, Personal Correspondence, May 6, 2015)

The ability to fully communicate and participate in all aspects of life was restated by another participant who shared:

Overall, my device has had a very positive impact on my life. Especially once people just take the time to listen to me and give me time to communicate.

"Everyone has an inner voice I finally found a way to let mine out." Those words are from a young lady named Carly Fleichmann but it's so true. (John, Personal Correspondence, May 4, 2015).

Another participant also described the affect of technology on his life:

I am incredibly grateful for the technology that I own now and for my twisted sense of humor. It really has changed my life in so many ways. It has allowed me go to university and live independently and it has allowed me to meet some amazing friends. It's amazing how much being able to communicate can change your life entirely. (Ken, Personal Correspondence, May 12, 2015).

Another participant described what life might have been like without the benefit of AAC.

The fact is that if my parents had not introduced me to alternative augmentative communication at the early age they did, I would not be speaking to you today. And if it weren't for alternative augmentative communication, I could very well be living in a nursing home watching Jerry Springer all day instead of being with my family, in my own space, working as a productive American. (Ian, Personal Correspondence, May 6, 2015)

Three study participants detailed interaction with companies developing communicative technology. One individual actually worked with a company that developed software for individuals with communication impairments and another tested the effectiveness of an SGD prior to commercial release. For all participants, social service programs were part of their network of technological support. However, not all participants were fully satisfied with the assistance provided by these agencies. One participant described his desire for continued support in terms of technology:

Looking at the bigger picture, I think I'd like to be more aware of developments in this area. I just think that once people have left school and have been sorted with a device, they have just been left to get on with it. This has been the case for me. I've only just recently found out about products that I may have been interested in trying out. (Ken, Personal Correspondence, May 12, 2015)

Another participant outlined why access to technology was so important for him and all those with communication disabilities:

This technology changed the course of my life. All of a sudden my family could see I was able to communicate. Augmentative communication gives a person like myself a chance to be educated, it gives a person a chance to build relationships, and it gives a person a chance to have a meaningful life because it gives them a tool to communicate. (Ben, Personal Correspondence, May 12, 2015)

Independence

All participants described the value they placed upon independence. Some described living independently, others spoke of the freedom to make choices and decisions, and all participants expressed the importance of accessing educational opportunities and enjoying activities related to daily life. According three of the six participants, the inability to verbally communicate could be more disabling than one's inability to walk or move. Of this one participant stated:

Not being able to speak clearly causes much frustration, misunderstanding and isolation. It means the daily interactions people have with others without even thinking about it become an ordeal. Little things like making a hair appointment, ordering an iced mocha latte with skim milk, or talking with one's doctor in

private becomes an ordeal, if not impossible. It also means missed opportunities when it comes to socializing, making friends, and finding jobs. This negatively impacts one's self-esteem and self-confidence, leading to further social isolation.

(Helen, Personal Correspondence, May 18, 2015)

The inability to communicate and the frustration related to CI was echoed by another participant:

Do you understand how frustrating it is not to be able to express yourself? Do you understand how frustrating it is when your parents or your brothers and sisters can't understand you? For the first six years of my life I couldn't express myself. I was stuck because no one could really understand me, and everybody wondered what my mental capability was. These were questions nobody could answer.

(Ben, Personal Correspondence, May 12, 2015)

Participants also described how activities of daily living could become more challenging when interacting with those unfamiliar with external AAC. Of this one participants stated:

As I became more independent, I wanted to become as independent as I could be. Pizza was a big bachelor dinner for me, but sometimes ordering pizza was a challenge. I would call the pizza place, and they would hang up on me once or twice before realizing it was a person on the phone. This all has changed because now you can order pizza over the Internet. I can make dinner for my wife every so often because I'm able to order pizza over the Internet. Sure, the pizza place did get use to my voice, and remembered who I was over time, but sometimes we

need to access the other tools that we have around us to help us achieve independence. (Ben, Personal Correspondence, May 5, 2015)

Participants also faced challenges when trying to secure employment in spite of education and capability.

It still irks a back corner of my mind that I am unemployed and surviving on social assistance because I couldn't find an employer willing to look beyond my jerky movements and difficult-to-understand speech to give my abilities and skills a chance. Actually, it sucks the chocolate chip right out of my cookie that after five years at high school and seven years at university, working hard to keep up (and sometimes surpass) my classmates and friends, only to watch them land jobs with decent salaries, Christmas bonuses and pension plans while I'm still stuck on social assistance, labeled as *unemployable*. I have no doubt that my speech impairment played a huge role in acquiring that employment status, but proving it is a different matter. After all, that would have been social injustice;

Discrimination, which is illegal. (Helen, Personal Correspondence, May 18, 2015)

According to study participants, their inability to verbally communicate would often cause others to make assumptions about their abilities. All participants felt that with the proper accommodations in place, their abilities would far outweigh their disabilities.

I am not asking for a hand out and I don't expect to be handed anything. I have proven myself over and over and I will continue to do so for the rest of my life. I know that gets old sometimes, but all of us have to prove our worth. It's just that some of us have to work harder to prove ourselves (Ben, Personal Correspondence, May 12, 2015).

Macro and Micro Level Conflict

While all participants referred to achieving empowerment through external AAC, they did not feel there was a connection between individual empowerment needs and the development of interpersonal conflict; And as previously mentioned, their approach to interpersonal conflict and conflict resolution was very similar to that of non-AAC users. However, three of the participants described a different response to policy or systemic decisions that could potentially impact their lives. In relation to service providers, one participant stated: “Conflict makes communication more difficult because it perpetuates stereotypes and propagation of incorrect information and training protocols” (John, Personal Correspondence, May 4, 2015). This participant went on to indicate that in certain situations, he felt as if he was treated like “less than a human” due to his different communicative needs (John, Personal Correspondence, May 4, 2015). Another participant shared this experience:

Even doctors have dismissed my ability to communicate. One specialist went as far as to tell me that he would ask me questions, but he expected my husband to respond because “it would be faster.” I was shocked! No one speaks for me on something as important as my health simply because it is more convenient for them. (Helen, Personal Correspondence, May 18, 2015)

Education was another area where participants experienced challenges gaining the same level of access as non-disabled peers. Of this one participants stated:

We always had to fight the system so I could be in the regular classroom. Even when they agreed I should be mainstreamed my home school district decided it would be easier to bus me 30 minutes away. They decided it would be easier to do

that than to try to make the accommodations that I needed to make me successful. Yet I persevered. (Ben, Personal Correspondence, May 12, 2015).

Three of the study participants were very vocal about larger social issues impacting individuals with communication impairments. One participant shared concerns over a potential change in policy regarding SGDs. Prior to the completion of this study the Centers for Medicare and Medicaid Services had enacted policy changes affecting the dissemination of SGDs as well as the applications and functions available to users. Devices would no longer be purchased for users, but would be rented. In addition, if an individual were to enter a hospital, long-term care facility, or hospice within the first thirteen months of use, the device would be returned to Medicare. Lastly, Medicare would no longer pay for any device that contained applications or functions not directly related to speech even when these applications were paid for by the beneficiary. These applications ranged from access to email, to applications that would allow users to control lights in their home. In discussing the impact of this policy change, one participant shared the following:

Communication today is not only about face-to-face interactions. We have a variety of ways to communicate in today's world. There's emailing, texting, tweeting, face booking, and etc. A person with a speech disability has the right to get on the computer, to text on the phone, and etc. We need these tools to have independence. We need these tools to communicate in variety of ways, just as a person without a speech disability has the ability to do. These aren't extra tools that are coming on the device. These are tools that are valuable to our every day communication. If we are unable to unlock these tools, we aren't able to

communicate to the best of our abilities (Ben, Personal Correspondence, May 12, 2015).

He goes on to describe the benefit of additional functions and tools on his SGD:

I have access to these tools, so I am able to email and text somebody when I need assistance. I am living independently on my own, but I do need assistance at times. I am able to send out a mass email or text message at that point, and it gives my network of friends a chance to reply. It gives me the assurance somebody will be over soon without having to call people individually. It has given me much greater independence over my life. The other valuable tool for me is the ability to turn on my television, and control my home lighting through my SGD device. If you are denying access to these tools, you are denying me access to live independently on my own. I need access to these tools, so that I am able to continue to live independently. If these tools aren't able to be unlocked, I will no longer have the opportunity to be as independent as I am right now. (Ben, Personal Correspondence, May 12, 2015)

As of July 15, 2015, the Steve Gleason Act (S768) passed the House and is awaiting the President's signature. This Bill rescinds the limitations of the previous policy regarding device ownership and access to applications. Thus, the functions and applications Ben described will again be accessible to individuals using an SGD.

This situation in particular is indicative of the issues facing those who are non-verbal. Four of the six participants indicated the inability to communicate presented additional challenges beyond those faced by disabled individuals who had the ability to speak. Of this he stated:

As a person living with a disability you are always going to have an uphill battle. This is true for all disabilities and it gets even more difficult when you have a communication disorder on top of the disability. When you have a disability and you have your communication you can navigate your way through the system and become almost anything you want to be. It isn't easy, but it is possible. When you have a disability and you aren't able communicate it is almost impossible to accomplish something you want to accomplish because most people will walk right by you. You can't communicate so you have nothing to offer. Why should we get to know you? Why should we give you a chance? (Ben, Personal Correspondence, May 12, 2015)

Theme Three: Education

In examining interview data, the words *education* and/or *teach* were present in each interview. Each study participant described the importance of education in the context of communication both for themselves as external AAC users, and non-AAC users. In terms of communication participants described how they endeavored to support communication with those unfamiliar with external AAC usage. This appeared to follow one of two paths: education of someone unfamiliar with external AAC or acquiescence to their misperception of the needs and abilities of the AAC user (See Figure 5).

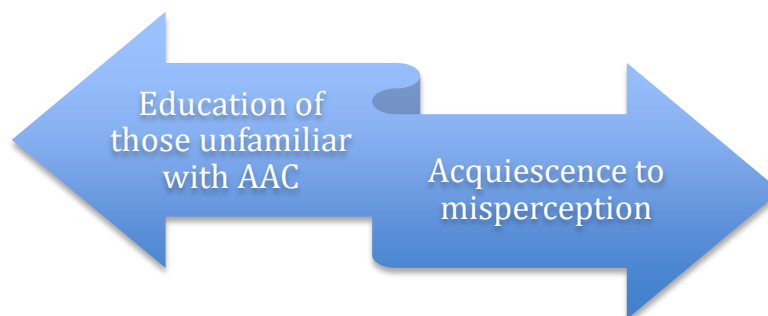


Figure 5. Divergent paths of education and acquiescence

For example, some participants simply allowed the communication to continue according to the non-AAC users behaviors. One participant described how often he is thought to be hearing impaired but does not clarify his use of external AAC, saying, “I’m too nice to correct them” (Ken, Personal Correspondence, May 11, 2015). Other participants described how often communication partners do not understand how they communicate. Of this one participant said, “ They (non-AAC users) don’t know how to communicate with me. They just don’t understand I don’t talk with my mouth” (Helen, Personal Correspondence, May 18, 2015). However, when the communication partner was sincerely interested in socializing with the external AAC user, all six participants looked upon these communicative differences as an opportunity for education rather than a catalyst to conflict. Even so, for all participants, showing communication partners “how” they communicate was a prerequisite to any productive conversation.

In describing the education of non-AAC users, one participant says: “Often people who aren’t familiar with AAC don't understand how I communicate, so they don't believe I can communicate. Therefore, I have to teach them how I communicate before we can have an actual conversation” (Ben, Personal Correspondence, May 5, 2015). To this point, another participant described how she handles those who do not know how she communicates: “I try to teach them” (Helen, Personal Correspondence, May 18, 2015). In spite of the differences in initial communication, the learning curve was not thought to be exceptionally steep: “It does not take someone that really wants to know an AAC user to catch on how to communicate with the user” (Ian, Personal Correspondence, May 16, 2015).

Even in the context of miscommunication, one participant refers to the significance of education:

If there is the possibility that miscommunication can lead to a conflict, I try to combat misunderstanding by education. I try to remember that people who don't understand or aren't familiar with AAC may not really understand HOW I communicate and I need to show them. (John, Personal Correspondence, May 4, 2015)

Another participant described the desire for those who do not understand, to simply ask for clarification: "If someone is unsure of how to communicate with me, I would rather they just ask. I'd rather that they ask me than ignore or dismiss me. I might be trying to communicate something important or even life threatening" (Helen, Personal Correspondence, May 18, 2015). Another participant also described the significance of openness to learning on the part of the non-AAC communication partner: "In conversation, I try to avoid using text-to-speech. When people read my conversation as I type it, it tends to pretty much eliminate any learning curve for communicating with me" (Leo, Personal Correspondence, May 18, 2015). Another participant, who described hostility on the part of those unfamiliar with external AAC, echoed the need for openness to different forms of communication. Of this he says: "I am more than willing to communicate to the world around me if just given an opportunity to connect in an environment free of hostile behavior towards me" (John, Personal Correspondence, May 4, 2015).

In addition to the importance of educating those unfamiliar with external AAC, participants described the significance of their own education in terms of understanding

their communicative needs. This extended to a recommendation for an individual who has a recent diagnosis requiring external AAC use:

The best advice I can give new AAC user is to be evaluated by a professional.

The professional will determine the exact way the user will best be able to communicate and share that information with them. They will also introduce and connect the user to those specialists. I would also suggest that user get involved with their local technology access center. They are a wonderful organization that can be a lot of help with the support and maintenance of alternative augmentative communication devices. (Ian, Personal Correspondence, May 16, 2015)

When asked about the willingness of others to learn about communication with an external AAC user, another participant described less positive experiences:

No, most people who have known me prior to the issues that rendered me nonverbal refuse to accept any of the new communications requirements. They're pretty stuck in the old world way of doing things, which is not able to really work.

(John, Personal Correspondence, May 4, 2015)

Misunderstanding of AAC

Five of the six participants described situations where they felt misunderstood by those unfamiliar with external AAC use. This misperception extended to a larger misunderstanding of the abilities and needs of those with a disability. In some cases, participants described feelings of marginalization. One participant stated:

I'll be honest I haven't always been good at expressing myself. I've always been really self-conscious about myself, and what other people think of me because of my disability. I guess it just comes with the territory. I've just got used to feeling

paranoid and awkward even around people I know. (Ken, Personal Correspondence, May 12, 2015).

Other participants viewed the education of those unfamiliar with external AAC or communication impairment as an opportunity to reduce misperception. Of this, one participant stated: “I’d like to think that I’m educating people that disabled people are just the same as everyone else” (Ken, Personal Correspondence, May 11, 2015). However, other participants felt some non-AAC users were uncomfortable and perhaps unwilling to learn. Another participant described an experience with a mother and child:

I was rolling down the street one afternoon when I encountered a curious child. He was staring at the wheelchair and was curious what was wrong with me yet his mom wouldn’t let him approach me. She was too embarrassed to come and ask me a question. This happens to me a lot. It is a thing that I have to deal with every time I go out. I am still amazed at the looks I get. They look at me like a strange being – like no one has ever seen a wheelchair. Then I wonder – will there ever be a time when I am seen as a normal person? (Ben, Personal Correspondence, May 5, 2015)

Another participant stated, “It is very difficult to deal with normal people who have prejudice against AAC users. Most do” (John, Personal Correspondence, May 4, 2015).

All participants described issues related to service professionals. One participant described this misunderstanding in connection to those working in healthcare:

I have been fortunate to surround myself with people who believe in me, who know I am capable, and have much to offer. I do not have that same latitude in surrounding myself with people who believe in me when it comes to my

healthcare. Oftentimes I need to deal with healthcare professionals as they come; I have very little choice. Frankly, these professionals have no clue when it comes to interacting with an individual with a speech impairment or, for that matter, any disability. Again, the irony. (Helen, Personal Correspondence, May 18, 2015)

Participants' felt educating those unfamiliar with external AAC devices was critical to an AAC user's access to larger social structures. Of this one participants indicated:

I believe everybody has the right to be involved in a community. People who have a communication disability have a really hard time forming relationships because they have a really hard time getting into a conversation with anyone. This is where an augmentative communication system can make a huge difference in a person's life. Yet we have to educate people about what augmentative communication is. Typically when someone meets a person who uses augmentative communication they don't know how to interact with them. When this happens the person says hi and walks away. He or she assumes the person couldn't understand them. People need to understand that people that use AAC are well educated. We want to talk to you. We want to build a relationship with you. (Ben, Personal Correspondence, May 6, 2015)

Theme Four: Identity

This study sought to understand whether or not a connection exists between identity standards and conflict. Specifically, it endeavored to understand whether identity standards impact the development of conflict and/or conflict resolution. Similar to the exploration of conflict, prior to embarking on open-ended questions about identity, participants were invited to give three words to describe how they see themselves.

Participants provided many words that describe their identity. These words were explored more deeply in subsequent interview questions. The following is a compilation of the terms provided by participants.

Table 4

Identity terms provided by participants

Adaptable	Honest
Blessed Christian	Independent as much as possible
Caring	Insightful
Competitive	Intelligent
Dessert perfectionist	Leader
Determined	Loves family
Disabled	Motivated
Fan boy	Nobody
Fighter	Opinionated
Follower of Jesus	Patient
Frank	Smart
Friendly	Sometimes has a short fuse
Funny (listed twice)	Spoiled and darn proud of it
Geek	Strong
Glass half full	Stupid
Good baker	Thoughtful
Great listener	Well-read
Happy	Willing (listed twice)

In addition to offering these describing words, participants were very willing to share about themselves and their accomplishments:

I was one of the first physically challenged kids in Tennessee to be mainstreamed through elementary and high school. I bought my first real computer in seventh grade. I graduated in the top twenty in a class of 350 students and was selected as the most intelligent male of my high school's senior class. I received my Associate's degree and my Bachelor's degree. On May 13 2000, I received my Master's degree in Computer Information Systems. (Ian, Personal Correspondence, May 6, 2015)

Independence and resilience were additional themes that emerged in the context of identity. One participant described this in the context of his life:

I never saw my disability as a barrier to doing anything. I was always going to go to university and I was always going to be independent. My disability is a big part of me, but I have never let it rule my life. Some people would say that's brave or courageous but I don't believe it is – and I hate being called that. There are plenty of people who deserve to be called brave more than me. I'm just a guy trying to get on with his life. (Ken, Personal Correspondence, May 11, 2015)

Some participants described how others often expected less of them due to their disability. This participant explained her battle against what she considers the lowered expectations of others:

People have expected me to take the nicely paved path laid out for the disabled. They expected me not to try, not to accomplish, and not to succeed. That map was tossed out long ago. I have followed my own path as a person, a woman who happens to have a physical disability. If following my ambitions, my passions, my dreams and helping people along the way is misbehaving, then I am going to continue misbehaving. (Helen, Personal Correspondence, May 18, 2015)

When asked for three words describing his identity, one participant's response was particularly striking. This participant provided these words in the following order: *nobody*, *intelligent*, and *stupid*. Further exploration of his description of identity suggested a comparison between his accomplishments and those of other individuals who, in his opinion, had left a more significant mark on the world. These included

technological innovators, entertainers, and musicians. His perception of himself and his identity standard was not directly connected to external AAC.

Five of the six participants described strong relationships with family and friends suggesting the importance of social connection to their sense of identity. Frequently, it was these individuals who continued to believe in the AAC user's abilities even when the outside world did not. One participant described the importance of relationships and their impact on his identity development.

I have lived with my disability all of my life. However, I have built numerous relationships with people, and because of those relationships I have been able to live my life to the best of my abilities. Sure, I am determined, bull-headed, stubborn, and don't accept no for an answer. Those attributes helped me push myself further, but without my relationships, I wouldn't have succeeded. (Ben, Personal Correspondence, May 12, 2015)

In spite of this internal drive and confidence, there was also frustration. This participant went on to describe his frustration at society's defining what is and what is not normal:

What defines something as normal? The Webster's Dictionary defines it as conforming to a type, standard, or regular pattern. Something that occurs naturally, something that is without physical or mental disorder. Society has defined normal as something without a struggle, something that is cool, and everything outside of this definition is not normal, weird, or uncool. We are bombarded with this idea every day. The media tells you if you have a flaw you can fix it. If you look different we will give you a make over. But don't be

satisfied with the person you are. Do something about it so you will be able to fit in. (Ben, Personal Correspondence, May 12, 2015)

The voice

An additional goal of this study was to understand whether or not a connection existed between an external AAC device and participant identity. For most, AAC itself was an instrument for communication. Although significantly important, a device that was inherently separate from its user. Of this one participant stated, “We need to understand AAC is a tool for communication. Communication helps people build relationships. Relationships help people achieve goals that some thought weren't attainable” (Ben, Personal Correspondence, May 12, 2015). All study participants made mention of the quality of the voice produced by their device. Some participants even avoided using the text to speech function entirely. It became clear that while the AAC device expanded their ability to communicate, they endeavored to maintain a clear distinction between the device and their individuality. This was largely due to the limitations of the voice produced by the device. One participant describe the power of the voice and the challenges this power creates for those who are nonverbal:

Imagine hearing a voice before seeing the individual. Chances are you can ascertain much information about the person from the voice, which is as unique as a fingerprint: the person's rough age, usually the gender and ethnicity, as well as the individual's emotional state and more. However, for the hundreds of thousands of individuals with speech impairments who rely on devices to communicate, this unique sound does not exist. Rather, they rely on a limited

number of synthesized voices to be their voice. (Helen, Personal Correspondence, May 20, 2015)

Another participant indicated, “Part of why I don’t use text-to-speech is because that digital voice isn’t the voice I hear in my head. I’m me; it’s the device that isn’t me. The AAC device is just a tool, nothing more” (Leo, Personal Correspondence, May 16, 2015).

Another participant felt the voice generated by his device was not demonstrative of his personality and was limited in terms of inflection and expression. However, having used his device for so long, it was the voice he had grown accustomed to:

I’d love to have a voice that isn’t just posh as this one. But I’ve sounded similar to this all my life so it would sound weird I think. I’m also not sure if it’s even possible at the moment. I definitely want to use different tones and stuff if I can in the future. I just think I can’t express myself properly by only using this voice. I can’t sound excited or sarcastic for example. But I don’t know what the technology has in store for us. (Ken, Personal Correspondence, May 11, 2015)

Another participant described the lack of uniqueness in the synthesized voice produced by her SGD:

For someone who relies on a synthesized voice - the same one as heard over the PA system at the Honolulu airport - using *my own, unique* voice would be beyond unbelievable! Actually, merely thinking about it brings tears to my eyes. (Helen, Personal Correspondence, May 20, 2015)

The words

One of the most fascinating parts of this study was the ability of participants to convey so much with words alone. As previously stated, the non-verbal behavior of these

participants presents differently due to mobility issues related to their diagnoses.

Therefore, the greatest learning took place when engaging in written conversation. This was particularly interesting given the vast amount of research describing the importance of attending to non-verbal communication. While conveying meaning entirely through text could be difficult, it is definitely a skill honed over time. Of this one participant says:

I do think that some people are better than others at using words though. I guess I'm just used to it so I've got more experience of what would work and what wouldn't. It still gets frustrating at times though, which is when body language etc would be useful. (Ken, Personal Correspondence, July 31, 2015)

Another participant chose not to regularly use an SGD. He stated that not only did he feel text to speech negatively impacted his communication, but the voice he heard from his device was not his own and did not fit with his identity standard. Thus, he described how he maintained his sense of self through text alone.

Back before I quit talking, word economy was really important because toward the end, my jaw used to tire out and quit working. It could be, 10 minutes of clear, continuous speech, then 30 minutes of nothing until I could speak again. So, if I wanted to carry on anything akin to normal conversation, I had to say lot, in just few words, giving my jaw time to rest while whoever would respond to what I just said. My writing, however, didn't match the way I spoke. I wrote like every shitty writer, using lots of words, TRYING to look smart. After I quit talking, my writing totally changed. Now, I write like I used to talk. I'm much MORE diligent about spelling, grammar and so on because my only language is

text. I never spoke incorrectly, my writing is no different. I speak in text. (Leo, Personal Correspondence, May 16, 2015)

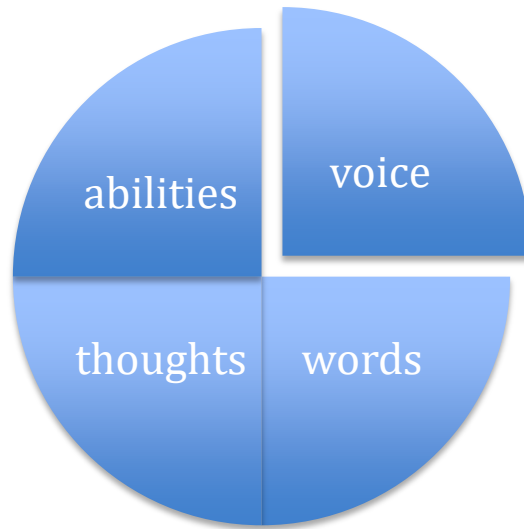


Figure 6. Separation of voice from identity

The disability

Participants expressed frustration at the misperceptions of others. These misperceptions came from a variety of individuals the AAC users encountered on a somewhat regular basis: “There have been countless instance where people have ignored or dismissed my ability to communicate or my method of communication” (Helen, Personal Communication, May 18, 2015). Another participant shared this experience and offered a description of his experiences when communicating with individuals in service professions:

When I am going out to eat, my wife or my friend usually has to order for me.

The waitress or waiter usually just ignores the computer voice that I communicate with. There was a time I would get upset by this, but I am so use to it now, it doesn't bother me. However, it is possible to order food when the person taking

the order is willing to listen and look past the disability. This is why we need to educate people because this should happen more often. (Ben, Personal Correspondence, May 4, 2015).

In other cases, participants described negative experiences with strangers on the street:

I've experienced everything from the accidental, where people are just not used to dealing with disabled people and do or say the wrong thing because they haven't been educated enough, to the downright nasty where people blatantly point, stare, laugh and call me names. (Ken, Personal Correspondence, May 12, 2015)

All participants expressed the desire for those in their community to look beyond their disability to the personal qualities existing beneath the surface. One participant expressed how she would like to be seen:

I would like to say that when you encounter me other countless others with speech and language disabilities in your business or organization, service, school, hospital or police station, please do not assume that I am hearing or cognitively impaired simply because you do not understand my speech. I do hear and I do understand you. I have the same needs, wants, dreams, and rights as anyone. Other people's misperceptions and assumptions are what limit me – not my so-called disability. Look beyond what is wrong with me and see what is right. You may be pleasantly surprised. (Helen, Personal Correspondence, May 18, 2015)

Another participants shared the desire to be truly seen rather than defined by his disability. Of this he said:

I wish people could see past the disability. In order for me to prove myself you have to look past my disability. You have to give me the opportunity and allow

me to show you who I am. You have to see I have unique gifts just like everybody else. (Ben, Personal Correspondence, May 12, 2015)

Conclusion

Chapter 4 described the results of this study. This description included the identification of the units of meaning and primary themes derived from the data. The four primary themes identified were communication, education, empowerment, and conflict. Within these primary themes, several sub themes emerged. These subthemes include miscommunication, conflict, technology, independence, the “voice”, the “words”, and misunderstanding of wants, needs, and abilities. Based upon these findings, I suggested the essence of the conflict experience of those using external AAC is combating the misperception by those unfamiliar with external AAC devices.

Chapter 5 outlines the conclusions drawn from the data collected in participant interviews. It examines the research questions guiding this study and presents data to support conclusions. In addition, Chapter 5 discusses the limitations of this study, suggestions for future research, and implications for professional practice. It was hypothesized that the conflict resolution experience of individuals using external AAC devices would differ from their non-AAC using peers. On an interpersonal level, participants in this study did not see external AAC use as having an impact on their experience with or response to developing or emergent conflict. However, their experience with larger societal level conflict was found to be quite different from non-AAC using peers. This does not appear to have a direct connection to miscommunication resulting from external AAC use. Rather, it appears to be more closely linked to non-AAC users’ misperception of the abilities and needs of those who use external AAC.

Connections were also discovered between macro-level conflict and both identity standards and empowerment needs.

Chapter 5: Discussion and Recommendations

This study sought to increase understanding in the area of conflict resolution scholarship. Specifically, it looked to identify conflict resolution behaviors, beliefs, values or thoughts of external AAC users; assess whether miscommunication between external AAC users and non-AAC users contributes to conflict or impacts conflict resolution; determine if identity standards and/or empowerment needs contribute to the development of conflict or shape conflict resolution; and understand the meaning of conflict resolution to individuals using external AAC devices. This population has, for the most part, been ignored in current conflict resolution research. However, their experience with conflict is of particular interest.

Due to the potentially asymmetrical nature of this interaction, the non-AAC using conversation partner may assume more of the communicative burden in an effort to ensure the accurate transfer of information. This dynamic seems to occur regardless of whether or not the AAC user requires this type of communicative support. Thus, the characteristics of conflict development and resolution between one who uses an external AAC device and one who does not are somewhat different from what is generally reflected in conflict resolution literature. The following discussion examines the data collected from participant interviews within the context of the research questions driving this study.

RQ 1. What are the conflict behaviors, beliefs, values, or thoughts of individuals using external AAC devices?

Participant responses suggest an interpretation of interview questions through a primarily interpersonal lens. This type of interaction generally occurred between those close to the external AAC user and parents, friends, romantic partners, siblings, and

colleagues. Laursen and colleagues (2001) divided peer conflict resolution tactics into three primary categories that include negotiation, coercion, and disengagement.

Researchers also found that coercive tactics decrease with age while negotiation increases (Laursen et al., 2001). All participants in this study described strategies and behaviors that reflect negotiation. These include statements such as:

- *“You just have to look at it from both perspectives.”*
- *“We usually talk about the problem.”*
- *“It takes communication to work out any problem, so talking about it is most important.”*
- *“I listen to the problem.”*

In spite of communicative differences, participants did not indicate the use of external AAC devices made conflict resolution significantly more difficult. One participant suggested external AAC use might preclude one from communicating all he or she wanted to, but stated this was something they would take into consideration prior to engaging in any type of conflict resolution dialogue. All six participants indicated they did not see a difference in their conflict resolution experience in comparison to non-AAC using peers nor did they feel dismissed by familiar peers due to external AAC use.

However, one participant did report the use of his device directly resulted in conflict with an individual outside of his peer group. In this instance, a security guard attempted to confiscate his device, not understanding its purpose. This participant further illustrated the importance of adequate training for service providers who were likely to encounter someone using an external AAC device. This particular instance could be described as an attribution error on the part of the security guard. Pruitt and Kim (2004)

suggested attribution errors occur more frequently when one has limited knowledge of the other. In this case, the security guard had limited knowledge or understanding of the participant's need for his device and may have had inadequate understanding of AAC in general.

One area that is not entirely clear is the impact of life long AAC use on one's response to conflict. It is possible the additional time required to communicate allows an AAC user to process thoughts and feelings, potentially minimizing strong emotional reactions: *"Sure, there are more things that an AAC user has to take into account, so the person might not get to say everything that they would like to say"*. Thus, their response to conflict and chosen coping strategies may develop differently in comparison to non-AAC using peers. It is also conceivable that some smaller areas of disagreement may not seem worth the communicative effort. The results of this study do not provide clarity regarding either of these points.

It is important to note the participant who experienced the conflict with the security guard was not a life-long external AAC user. Rather, he began using his device following a significant medical event. It is difficult to know whether his feelings regarding this particular incident have any relationship to his previous experience as a verbal speaker. He further described perceived mistreatment in very strong terms such as *"hostility"* and feeling as if he was treated as *"less than human"*. However, he was not alone. Other participants also described feeling as if they were judged as someone "lesser than" or "not normal". In these instances participants did attribute these misperceptions to their inability to communicate. However aside from the aforementioned example, other participants seemed to place these types of interactions in a different category and did not

immediately consider macro-level disputes when answering interview questions relating to conflict. This will be explored further later in this chapter.

Pruitt and Kim (2004) indicated the active strategies of conflict resolution include contending, yielding, and problem solving. They are defined as active strategies since: “each involves a relatively consistent, coherent effort to setting a conflict” (p.7). This is accomplished in one of three ways: domination, acquiescence, or collaboration. Conversely, avoiding is a passive strategy that includes inaction or withdrawal. Those who avoid, endeavor to avoid a situation, person, or interaction that could lead to conflict (Pruitt & Kim, 2004).

Based upon participant responses all four conflict resolution strategies were present within the collected data. All six participants described using problem solving when resolving conflicts; however, in addition to describing problem-solving tactics, one participant described himself as a conflict avoider stating: *“I fold like a cheap chair”*. Again, he did not relate his avoidance to external AAC use, but rather to his personal approach to and discomfort with conflict: *“I’ll argue technology, politics, religion, I’m not scared of ALL conflict... just conflict that’s very personal”*. According to this participant, this was especially true when someone was upset with him: *“If you’re mad at SOMEONE ELSE that confrontation is easy, if the person is mad at YOU, it’s not”*.

An interpretation of the data collected from participant interviews suggests the interpersonal conflict experience of individuals who use external AAC devices is very similar to that of non-AAC using peers. They tend to approach conflict in one of four ways outlined in conflict resolution literature. Their chosen approach does not appear to have a direct connection to external AAC use, but rather personal preference and comfort

level. On an interpersonal level, the exception appears to be the participant who was in a physical altercation directly related to his device. However, it is unclear whether his contending posture was something that he employed throughout his life, or only after he became an external AAC user. Nonetheless, four other participants reiterated feeling judged by those unfamiliar with external AAC whether or not they described a related conflict experience.

Although participants interpreted questions related to conflict through a micro-level interpersonal lens, responses to other questions indicated a different approach to macro-level conflict. In these cases, the needs of external AAC users were quite different from the non-AAC using population. This is not due to differences in conflict resolution tactics, but rather the qualities of the conflict itself. These qualities were often closely related to access to services and accommodations that ultimately influenced their quality of life. For those who do not use external AAC devices, they are less likely to have experienced issues related to access.

RQ 2. Does miscommunication between AAC and non-AAC users contribute to conflict?

In assessing data obtained from interview questions, particular attention was paid to the role of external AAC devices in successful communication. Both accurate understanding of the intended message as well as successful communicative action were examined. Communicative action described the ability of the AAC user to physically impart their intended message. However, communicative action does not account for understanding on the part of the listener. Participants in this study did feel misunderstanding of any intended message could contribute to the development of

conflict. However, they did not see this as the result of issues with communicative action resulting from external AAC use.

There are several reasons for this. First, each study participant was very adept at using his or her device. Some participants employed more than one device depending upon the situation. For example, one device was used in a noisy atmosphere, while another in a smaller, more personal setting. Other participants found strategies to increase clarity of sound on their SGD. This was often accomplished through changes in the way the message was entered in to the device. This was done in order to ensure the speed, tone, and intonation of the message would mimic the natural rhythm and the rise and fall of verbal conversation. In addition, some participants worked with systems designed specially for their physical needs maximizing their ability to compose a message. Thus, the ability to navigate their device did not present an issue and according to participants, did not result in miscommunication. Light and Drager (2007) called this communicative efficiency.

Regardless of the genesis of the disabling condition, study participants were of the opinion that non-AAC users did need to adjust their communicative style when conversing with them. They indicated they were generally inclined to support conversations with non-AAC users if the non-AAC user demonstrated a willingness to learn about AAC. While some researchers suggested social engagement with an external AAC user places more communicative burden on the non-AAC user (Pennington et al., 2009; Keen et al, 2005; Marshall et al., 1997; McCormack et al., 1997), participants in this study found some of these so-called helpful overtures to be more of an intrusion than a support.

When describing communication with non-AAC users, study participants frequently used the words *interrupts* or *interrupting*. This seemed to occur most often when non-AAC users endeavored to move the conversation along through what Sandberg and Liliedahl (2009) called, rescuing. Although the intention of the non-AAC user may have been to support the conversation, when one “rescues” the conversation, they effectively take control of the participation framework (Tannen, 1990). While the need for conversational rescuing may be present be for AAC users with comorbid diagnoses of receptive language disorder and/or cognitive impairment, it generally is not a need for those with motor speech disabilities. Participants suggested the most beneficial support would be for the listener to provide additional wait time for their responses rather than endeavoring to anticipate their answer. In the opinion of study participants, this behavior is generally due to a lack of understanding regarding external AAC and misperception of the abilities of those who us AAC.

Be that as it may, participant responses highlighted the importance of what Bauer and Auer (2009) described as the “collaborative principle” (p. 259). This is a co-construction process whereby both partners work together to achieve successful communication. Although these researchers directly connect this behavior to communication between an AAC user communicating with a non-AAC user, this participation framework is very similar to successful communicative exchanges between non-AAC communication partners. In each instance, both partners must work together in order to ensure successful transmission and reception of an intended message.

Some researchers have found those with CI often experience additional stress and present with diminished coping skills (Laures-Gore, et al., 2010; McCormack et al.,

1997). While study participants did feel communicating with a non-AAC user could present a communicative challenge, they did not describe communication with non-AAC users as stressful or tense. They did however describe this type of communication as something that was often *very difficult* and sometimes *frustrating* but by no means impossible if, as previously stated, the non-AAC user was willing to learn.

Participants did not view miscommunication resulting in conflict as a direct result of external AAC use. Rather, they perceived miscommunication as a byproduct of social communication as a whole. Participants did feel that conflict affected communication and could make it more difficult. However, this was not the result of difficulty with the communicative action but rather difficulty articulating the intended message whereby the listener has a deeper understanding of meaning.

- *“I think conflict can arise in any situation where someone is misunderstood.”*
- *“If two people are in a conflict and are unable to get on the same page, the conflict will last a long time.”*
- *“You just have to look at it from both perspectives.”*

For these participants, they felt miscommunication could result in conflict, but they did not indicate having experienced such.

- *“It can result in conflict, but it doesn't have to. I believe it depends on the situation.”*
- *“It hasn't happened often but I think it can.”*

Katz, Lawyer, and Sweedler (2010) purport in order to fully understand one's intended communication it is important to understand different representational systems. For those using external AAC devices this representational system includes differences in

the overall communicative action. This will require more work on the part of both conversation partners but in the opinion of the participants of this study, such work involves openness and patience rather than becoming more active in the communicative process.

RQ 3. Do identity standards and empowerment needs contribute to the development of conflict?

Scholars have described the connection between language and the development of identity. This includes one's social and political access but perhaps most importantly, one's sense of self. (Weedon, 1987). For these reasons, the role of identity and empowerment in relationship to conflict and conflict resolution were of particular interest. Therefore, both areas were examined independently as well as in relation to the development of conflict and conflict resolution.

Stone and colleagues (1999) suggested three common identity issues are most often related to a belief in one's competence, worthiness, and goodness. Study participants made affirming personal statements suggesting a belief in their competence in all three areas. However, four of the six participants outlined experiences that challenged their identity standard. These included statements such as:

- *“Then I wonder – will there ever be a time when I am seen as a normal person?”*
- *“I’ve always been really self-conscious about myself, and what other people think of me because of my disability.”*

A disruption to one's identity standard is called an “identity quake” (Stone et al., 1999, p. 114). When these disruptions or “quakes” occur, individuals endeavor to adjust the “reflected appraisals” of others in order to restore their identity standard (Zanna &

Cooper, 1976). Reflected appraisals have been referred to as the mirrors reflecting the outside world's perception of one's identity.

Participants frequently experienced identity quakes resulting from misperception: "*People have expected me to take the nicely paved path laid out for the disabled. They expected me not to try, not to accomplish, and not to succeed.*" However, they did not employ the mechanisms of legitimation described in chapter 2. These include *short-term credit, selective perception, interpretation, blaming, disavowal, switching identities, and withdrawal*. The reasons for this are not entirely clear. However, it is possible that for those who have lived with a disability throughout their lives, they have grown somewhat accustomed to reflected appraisals that do not support their identity standard: "*I've just got used to feeling paranoid and awkward even around people I know.*" As a result, their mechanisms of legitimation may present somewhat differently from those used by one who does not have a disability. Interestingly, some participants were also uncomfortable with overly flattering opinions of them in relation to their disability and their individual accomplishments: "*There are plenty of people who deserve to be called brave more than me. I'm just a guy trying to get on with his life.*"

Regardless of the reflected appraisals, participants did not describe changes in self-perception based on the reactions of others. In fact, of the thirty-four words provided, only *nobody* and *stupid* could objectively suggest a poor self-concept. Upon further investigation, these words were based upon comparisons of this participant and what he later described as profoundly influential individuals. Beyond these terms, participants used very positive words to describe their relationships, roles, abilities, skills, and accomplishments. All descriptions they considered to be part of their identity.

Although their response to identity quakes was not entirely clear, what was clear was their inclination to satisfy face needs. Specifically, competence face whereby one is recognized for abilities and skills (Lim & Bowers, at cited in Folger et al., 2001). While participants may not have consistently attempted to adjust the reflected appraisals of a single individual, they were more likely to engage in societal level discourse in an effort to affect change on a larger level. Since four of the six participants maintained a very active on-line presence, this provided an avenue for galvanizing supporters and working for social change.

Julian Rappaport (1981) suggests for those with disabilities, empowerment is an assurance of rights and choices. All participants in this study viewed themselves as individuals capable of making autonomous, self-determined decisions about their lives (Wehmeyer, Sands, Doll, & Palmer, 1997). Wehmeyer and associates (1997) suggested four characteristics of self-determined people:

Table 5

Participants' responses related to Wehmeyer's characteristics of self-determined people

Characteristic	Participant Response
The person acted autonomously	<i>"Independent as much as possible"</i>
The behavior(s) are self-regulated	<i>"I try to remember that people who don't understand or aren't familiar with AAC may not really understand HOW I communicate and I need to show them."</i>
The person initiated and responded to the events in a "psychologically empowered" manner	<i>"No one speaks for me on something as important as my health simply because it is more convenient for them."</i>
The person acted in a self-realizing manner (p. 307).	<i>"I have lived with my disability all of my life. However, I have built numerous relationships with people, and because of those relationships I have been able to live my life to the best of my abilities"</i>

Consistent with many areas of empowerment research, participants sought services that promoted personal growth (Dempsey & Foreman, 1997), provided an avenue to make choices and express needs (Martin & Marshall, 1995), and allowed them to make autonomous, self-determined decisions about their lives (Wehmeyer, Sands, Doll, & Palmer, 1997).

Although it is difficult to fully differentiate between behaviors and responses motivated by identity standards and those impelled by empowerment needs, perhaps the defining attribute was the difference between the impact of perception and misperception on individual rights. While identity quakes create stress and discomfort as one endeavors to alter reflected appraisals (Burke, 1991; Zanna & Cooper, 1976), one could argue there is a difference between reducing stress and maintaining liberties: Essentially the difference between one's opinions on your sense of self and one's opinions impacting your access to an independent life.

- *“If it weren't for alternative augmentative communication, I could very well be living in a nursing home watching Jerry Springer all day instead of being with my family in my own space, working as a productive American.”*
- *“It has definitely made me a lot more independent and confident. I think it has allowed me to live my life much more fully than I would have done without it. It has literally given me a voice in the world.”*

Four of the six participants were very active and outspoken advocates for individuals with disabilities. They participated in various forms of advocacy on micro and macro levels. Since advocacy is defined as “public support for or recommendation of

a particular cause or policy” (Oxford Dictionaries, 2015) one might hesitate to call this conflict. However, empowerment needs did indeed influence participant behavior and their willingness to engage in activism. The intangible interests (Pruitt & Kim, 2004) of participants served as a galvanizing force. Thus, there appeared to be a connection between both identity standards and empowerment needs on the development of macro-level conflict and conflict resolution. Since the macro-level conflict generally resulted from limited access, it was typically not the type of struggle a non-AAC user would be aware of or might encounter.

RQ 4. For those using external AAC devices, what is the impact of conflict resolution and what do successful resolutions mean to an external AAC user?

Although it was hypothesized there would be contrasts between the conflict resolution experience of individuals who use external AAC devices and those who do not, in relation to micro level conflict, participant responses do not support this supposition. Rather, their experience with interpersonal conflict and conflict resolution was very similar to that of non-AAC users. For participants, conflict styles were not fixed, but dynamic with the potential to shift and change over time (Folger et al., 2009). Participants did not indicate resolution was impacted by external AAC, but rather by ineffective communication as a whole. All participants described strategies such as collaboration and problem solving, but also present were strategies of contending, yielding, and avoiding. Ultimately, successful interpersonal conflict resolutions held the same meaning for both AAC users and non-AAC users – feeling heard and validated and finding a mutually agreed upon solution.

However, when dealing with macro level conflict, the experience of external AAC users was vastly different from non-AAC using peers. Four of the six participants

described situations whereby individuals unfamiliar with communication impairments and/or external AAC devices assumed they were incapable of making decisions, unable to advocate for themselves, and in some instances, cognitively or hearing impaired. They struggled to secure employment: *“I couldn’t find an employer willing to look beyond my jerky movements and difficult-to-understand speech to give my abilities and skills a chance.”* In addition, participants described the unwillingness of service professionals to provide the environmental or structural modifications necessary for them to successfully communicate: *“Frankly, these professionals have no clue when it comes to interacting with an individual with a speech impairment or, for that matter, any disability.”* Four of participants in this study described the inability to communicate as more challenging than the inability to walk:

- *“They assume I’m hearing impaired.”*
- *“They assume I’m cognitively impaired.”*
- *“They treat me less than human.”*
- *“It is very difficult to deal with normal people who have prejudice against AAC users. Most do”*

The results of data collected from participant interviews suggests on a societal level, successful conflict resolution means achieving systemic change that allows individuals with motor speech impairment the same degree of rights and access as non-CI peers. In their opinion, an inability to communicate creates a far greater challenge than a physical disability since the lack of verbal ability causes many to make incorrect judgments about their capabilities. Even for this study, the Institutional Review Board required additional informed consent for a guardian or legal representative of the

participants. None of the study participants had a cognitive impairment that would render them unable to make their own decisions. This requirement demonstrates the paradox of external AAC devices. They offer the opportunity for a more independent, meaningful life, yet are a significant contributor to the outside world's misperception of the abilities of those who use them.

Discussion

The most notable difference in the conflict resolution experience of individuals who use external AAC devices in comparison to non-AAC using peers is not related to their conflict behavior, rather it is directly related to their conflict experience. These conflicts are quite different from individuals who do not have communication impairment even if they have a physical disability. In the absence of verbal language, external AAC users must negotiate conflicts relating to the recognition of their identity as a fully capable, self-determined, autonomous adult.

Pruitt and Kim (2004) suggest interests have a significant impact on human behavior. Of this they indicate: "Interests tend to be central to people's thinking and action, forming the core of many of their attitudes, goals, and intentions" (p.15). Individual or group interests are often tangible, relating to property, assets, or finances. According to Pruitt and Kim (2004), examples of intangible interests include power, honor, and recognition (p. 15). Individuals in this study had more intangible interests. For these participants, they included dignity, autonomy, and access. However, these intangible interests could lead to tangible rewards in terms of employment and educational opportunities: Two areas in which some participants felt they had been unfairly limited due to misperceptions.

Pruitt and Kim (2004) suggested the following three criteria often contribute to the rigidity of conflict. They included:

1. Important interests underlie the aspirations (basic human needs)
2. Strongly felt principles
3. Available options are either-or. In this case concession is tantamount to capitulation (Pruitt & Kim, 2004, p. 19)

Understandably, the participants in this study have a desire for and feel entitled to the same level of access as non-disabled peers. Likewise, the lack of access to reasonable accommodations and modifications has negatively impacted their ability to live fully independent lives. Some participants have expressed frustration resulting from employment limitations. Thus, this macro-level conflict is quite rigid due to the aspirations of the external AAC users in this study.

In the case of disability rights, it seems that those without disabilities simply do not understand what they do not understand. As a result, there is a limited awareness of how the needs of those with disabilities translate to self-realization and autonomy. This is especially true for those who are unable to verbally communicate. Thankfully the last twenty years have provided external AAC users a voice with which to advocate for themselves. As an on-line presence, external AAC users have the ability to articulate their thoughts, feelings, and needs to a wider audience of peers allowing group mobilization to occur. Without the capacity to do so, their ability to coordinate efforts toward achieving their aspirations would be far more difficult if not impossible.

Four of the six participants in this study articulated awareness of the discrepancy between their rights and the rights of non-communication impaired peers. Pruitt and Kim

(2004) called group awareness of deprivation in comparison to other groups, *fraternalistic deprivation*.

- *“When you have a disability and you aren’t able communicate it is almost impossible to accomplish something you want to accomplish because most people will walk right by you.”*
- *“I am considered unemployable. I have no doubt that my speech impairment played a huge role in acquiring that employment status, but proving it is a different matter.”*

For those in this study, governmental policy and legislation defined the boundaries of access. According to participants, the challenge for external AAC users is their lack of power over external social structures. Folger and colleagues (2001) described power as: “the ability to influence or control events” (p. 136). Two participants in this study describe examples of the hidden use of power. In both cases, the power was held by government agencies developing policies that directly impacted the rights of access of individuals with communication impairments. While other participants did not directly express upset regarding these policies, the circumstances described would certainly have affected their quality of life:

- *“If you are denying access to these tools, you are denying me access to live independently on my own.”*
- *“We always had to fight the system so I could be in the regular classroom.”*
- *“It’s just that some of us have to work harder to prove ourselves.”*

The ability of individuals with CI to mobilize and affect systemic change is quite challenging. In addition to the aforementioned issues present for anyone who must rely

on an external communication device, many with such impairment have co-existing physical limitations that present additional challenges. Thus, the ability to combat larger issues is quite different from non-disabled peers. Subsequently for participants in this study, successful macro-level conflict resolution meant achieving specific characteristics of empowerment. More specifically, a sense of control (Simon, 1990): *“As I became more independent, I wanted to become as independent as I could be”* and *“I have followed my own path as a person, a woman who happens to have a physical disability;”* the ability to take personal action (Simon, 1990; Zimmerman, 1990; Solomon, 1987): *“People need to understand that people that use AAC are well educated. We want to talk to you. We want to build a relationship with you;”* and unfettered access to necessary resources (Serrano-Garcia, 1984): *“I have followed my own path as a person, a woman who happens to have a physical disability. If following my ambitions, my passions, my dreams and helping people along the way is misbehaving, then I am going to continue misbehaving.”*

The experiences of the participants in this study regarding societal-level conflict demonstrate the ability of those in power to exert issue control. Folger and colleagues (2001) found issue control is an example of the hidden use of power. This expression of power is exceptionally dangerous because it frequently goes undetected (Lukes, 1974; Bachrach & Baratz, 1970). This type of power also has the ability to define reality and establish what concerns are legitimate: *“The stronger person can often determine what needs are relevant through his or her ability to define what the conflict is about – in other words, to exert issue control”* (Folger et al., 2001, p. 163). This allows those in power to maintain the status quo.

In relation to the rights of the disabled, this type of issue control prevents exploration of effective solutions because those in power do not fully understand both sides of the problem. Thus, they may be unaware of the limitations placed on the rights of disabled individuals through their support of the status quo. They are unable to see issues through any lens other than their own. This often results in the weaker party feeling helpless or powerless to effect change. With the technological advances of the last twenty years, the ability of external AAC users to effectively find their voice has become a reality. Not only has AAC provided a mechanism for communication, it has likewise provided a platform for social change.

Limitations

This study has several limitations that must be acknowledged prior to offering recommendations for future study. First, it is affected by sampling bias largely due to the challenges of finding participants within a specific geographic location. As a result, sampling was opportunistic and based on researcher convenience.

Second, this study does not represent a diverse population in terms of gender, ethnicity, or education. Women were largely under-represented in this study, outnumbered by male participants five to one. Thus, potential differences in male and female experiences were neither evident nor examined. All study participants were Caucasian and although two of the six participants reside outside of the United States, participants were English speaking and reside in Western countries.

Third, participants had varying levels of mobility that could impact their experience as an external AAC user. Three of the participants were quadriplegic, one paraplegic, one although mobile had some degree of physical limitation, and one without

physical limitation beyond motor speech impairment. Fourth, although four participants were life-long external AAC users, two individuals were verbal speakers into their adult lives. Thus, it is unclear whether or not there is a significant difference in opinion or experience based on past verbal speaking ability.

An additional study limitation is potential self-reporting bias. While differences in interpersonal conflict between AAC and non-AAC users were not detected, it is possible this is due in large part to the participant's frame of reference. Non-AAC users may have identified variations not readily apparent to the participants in this study. In addition, participants may have interpreted questions related to conflict and conflict resolution based on their access to technology. Thus, their responses may reflect a belief that through the use of technology, their response to conflict is far more similar to that of non-AAC users than it would be without access to AAC.

Recommendations for Future Study

Given the importance of this area of scholarship, there are many areas of study that demand further exploration. First, and foremost, expanded samples are needed. Although this is not without challenge due to the variety in need and presentation of motor speech disability, a deeper understanding of individuals with similar physical experiences may yield important information regarding therapy and intervention. Furthermore, it will shine a light on social needs common to all individuals regardless of communicative ability.

I also recommend a closer investigation of the differences in social experience between life long AAC users and those who begin using AAC devices later in life. Certainly exploration of the conflict and conflict resolution experience is of great benefit,

but so too is the difference in the conflict experience of those were once verbal speakers. As is evident by the hypothesis in this study, verbal speakers have a vastly different perception of the communicative efficiency of text alone. This includes the potential affect of synchronous verses asynchronous communication on conflict management and transformation. Lastly, given the potential for anonymity and/or the possibility of interacting with someone without knowledge of one's disability influences social relationships, it may also be beneficial to examine how social media impacts the relationships of those who use external AAC devices.

I would also suggest specifically studying those with motor speech disability rather than all individuals with CI. CI has many presentations that may exceed an inability to physically produce the sounds required for verbal speech. These include receptive and expressive language disorders, and in some cases additional cognitive impairment. Thus, the co-construction process described by theorists (Hormeyer & Renner, 2013; Bauer & Auer, 2009) may be quite different when communicating with individuals whose issue is purely physical rather than cognitive. To this point, since the co-construction process requires more of the non-AAC using communication partner, examination of the experience of the non-AAC using communication partner would also be beneficial.

Another area worthy of study is the impact of technological advances on the conflict resolution process. The availability of devices specifically designed to support communication has increased significantly as has their ability to meet diverse communicative needs. The evolution of these devices has offered users access to communication that would not have been possible even twenty years ago. It would be

valuable to further explore how these changes have impacted the conflict resolution process, conflict management, and conflict transformation. Clearly this increased level of communicative access has allowed those with CI to engage with the societal-level conflict over their rights and dignity much more directly and effectively than ever before.

Finally and perhaps most importantly, we as researchers need to examine our own perceptions of verbal and non-verbal communication. While research supports the importance of communication focusing on both areas, if one were missing a limb we would not immediately question their decision-making ability. However, when one is missing a voice, we question their intellect, their ability, and their competence. It is my hope that as we move forward we will endeavor to learn more about this population without the hindrance of misperception not only of effective communication, but likewise what empowered characteristics do and do not look like.

Implications for Professional Practice

This study raises awareness of the conflict resolution experiences of individuals who use external AAC devices. I am hopeful this work will positively impact various field of scholarship and professional practice for those working to develop assistive technology as well as practitioners who work with those using such devices. This includes speech pathologists, occupational and physical therapists, and educators who interact with and support the learning, socialization, and rehabilitation of individuals with motor speech impairment.

For those in the field of conflict analysis and resolution, this study finds many similarities in the interpersonal conflict experience of those who do and do not use external AAC devices. However, those using such devices may have a dramatically

different experience dealing with larger societal-level conflicts that directly impact their quality of life. This study highlights the importance of increasing understanding of the social constructs that limit the autonomy and independence of individuals with communication impairments. These are the areas in whereby greater understanding on the part of those working in the fields of negotiation and mediation may provide the greatest support.

In addition, practitioners would benefit from developing a deeper awareness and understanding of the potential differences in physical presentation and the body language of those who use external AAC devices. This requires a different level of openness to a manner of communication that is unfamiliar. Those in the field need to take the role of a learner and supporter rather than a conversational or situational rescuer. The demonstration of competency when working with individuals with motor speech disability will help conflict resolution practitioners to provide the most effective and relevant support to those using external AAC devices. An approach that includes not only increasing one's ability to communicate meaning, but to meaningfully communicate.

Conclusion

Within the context of the research questions guiding this study, Chapter 5 provided supporting evidence for subsequent conclusions. Additional discussion outlined the limitations of this study such as several areas related to the participant sample and potential self-reporting bias. Suggestions for future research with external AAC users included larger sample sizes including a more diverse population (gender, ethnicity, education, socio-economic status), and a deeper exploration of the potential experiential differences in the conflict experience of this population. In terms of contributions to the

field of conflict resolution, the different needs of this population as well as the differences in physical presentation that may impact communication are two important areas that should be considered in professional practice.

On an interpersonal level, participants in this study did not see external AAC use as having an impact on their experience with or response to developing or emergent conflict. However, their experience with larger societal level conflict was found to be quite different from non-AAC using peers. This does not appear to be a direct connection between miscommunication resulting in conflict. Rather, it appears to be more closely linked to non-AAC users' misperception of the abilities and needs of those who use external AAC. Connections were also discovered between macro-level conflict and both identity standards and empowerment needs.

In a society that is grounded in verbal communication, social interaction without the benefit of speech is a complicated undertaking. Although most of us are naturally inclined to respond and react to non-verbal cues such as facial expression or body language, we are also very aware of the nuances of spoken language such as rate, fluency and volume. Attempting to communicate with one who does not have the ability to support communication through vocal means is daunting. While physical cues provide some information, the inability to easily engage in conversation in a familiar way, impacts the communicative exchange. As verbal speakers, the absence of these communicative supports often creates a hesitance to engage in communication with someone who speaks through technological means. What is more concerning, it may result in a misjudgment of their abilities.

The process grows exponentially more difficult with the threat of miscommunication and potential conflict. Frustration and discord are often accompanied by strong emotions; emotions that for those using external AAC, may not easily be communicated. They may not have the ability to shout or question or the means to quickly react to a challenge or criticism. If they are capable of producing speech, they may not be easily understood. Regardless of physical challenges, they do have thoughts, feelings, and opinions. They DO have a voice.

Those using external AAC devices require the cooperation of their conversation partner in a completely different manner than non-AAC using peers. Communication between AAC users and non-users is different but by no means impossible. Although the field of conflict resolution has not focused on this area of research, the ability of this particular group to persist in making themselves understood is an area of research that demanded further attention. In the words of Carl Rogers (1980):

When I say I enjoy hearing something, I mean, of course, hearing deeply. I mean that I hear the words, the thoughts, the feeling tones, the personal meaning, even the meaning that is below the conscious intent of the speaker. Sometimes too, in a message which superficially is not very important, I hear a deep human cry that lies buried and unknown far below the surface of the person. (p. 8)

Theorists suggest only a small piece of communicative understanding is derived from words alone (Hustad, 2007; Katz, Lawyer, & Sweedler, 2010; Bolton, 1979). In a widely referenced paper, Albert Mehrabian (1968) went so far as to suggest in successful communication only 7% of the communication derives from verbal language with 38% from tone of voice and the remaining 55% coming from nonverbal language. While other

theorists have subsequently challenged these percentages, there is consensus among scholars that successful communication includes both verbal and nonverbal messaging. As a result, successful communication requires both the speaker and the listener attend to verbal and nonverbal behavior. Katz, Lawyer, and Sweedler (2010) proposed:

Reflective listening is a special type of listening that involves paying respectful attention to the content and feelings expressed in another's communication, hearing and understanding, and then letting the other know that he or she is being heard and understood (p. 27).

Since starting my research I have been lucky enough to correspond with many brilliant, insightful, helpful people. All of these people, without exception, are very careful and thoughtful with their words. Conversely, many people I encounter on a daily basis who may communicate more traditionally are not nearly as careful and thoughtful in their verbal conversation and in their email and electronic correspondence even less so. In my position as a school counselor, I talk with students about the importance of digital consciousness and appropriate use of technology since may be difficult to convey an entire message based on text alone. However, that has NOT been my experience during this research. I feel that every message has been conveyed fully, with an amazing economy of words, every exchange, very concise yet incredibly meaningful. And all without body language, tone, inflection, speed-all the things verbal speakers believe are needed to convey a message fully. In corresponding with a participant about this observation, he proved my point by articulating my experience far better than I ever could.

Honestly, I think you can convey the intangibles of speech, tone, rhythm, emotion, in writing. It's almost like writing music. If you arrange the right words in the right way, with the right punctuation, the reader can hear the intangibles in their head. (Leo, Personal Correspondence, May 15, 2015).

References:

- Advocacy. (2015). In *OxfordDictionaries.com*. Retrieved July 22, 2015 from, http://www.oxforddictionaries.com/us/definition/american_english/advocacy
- Anderson, K., Baladin, S., & Clendon, S. (2011). "He cares about me and I care about him." Children's experiences of friendship with peers who use AAC. *Augmentative and Alternative Communication, 27*(2), 77–90.
- Anward, J. (2002). Own words: On achieving normality through paraphasias. In C. Goodwin (Ed.), *Conversation and brain damage* (pp. 189–210). New York, NY: Oxford University Press.
- Aphasia, American Speech and Hearing Association, 2014. Retrieved from <http://www.asha.org/public/speech/disorders/aphasia.htm>
- Augmentative and Alternative Communication, American Speech and Hearing Association, 2013. Retrieved from http://www.asha.org/public/speech/disorders/AAC/#what_is
- Bachrach, P., & Baratz, M.S. (1970). *Power and poverty*. New York, NY: Oxford University Press.
- Baker, L., & Cantwell, D. P. (1987). Comparison of well, emotionally disordered, and behaviorally disordered children with linguistic problems. *Journal of the American Academy of Child Adolescent Psychiatry, 26*, 193-196.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioural change. *Psychological Reviews, 84*. 191-215.
- Bauer, A., & Auer, P. (2009). *Aphasie im Alltag*. Stuttgart: Thieme.

- Bateson, M.C. (1975). Mother–infant exchanges: the epigenesis of conversation Interaction. *Annals of the New York Academy of Science*, 263, 101–133.
- Bedrosian, J.L., Hoag, L.A., Johnson, D., & Calculator, S.N. (1998). Communicative competence as perceived in adults with severe speech impairments associated with cerebral palsy. *Journal of Speech, Language, and Hearing Research*, 41(3). 667-676.
- Beukelman, D. (2012, June 28). *AAC for the 21st century: Framing the future*. Presented at the Rehabilitation Engineering Research Center on Communication Enhancement State of the Science Conference. Retrieved from http://aac-lerc.psu.edu/documents/SoSc_intro.pdf.
- Beukelman, D. and Mirenda, P. (2013). *Augmentative and alternative communication: Supporting children and adults with complex communication needs* (4th Ed.). Baltimore, MD: Paul Brookes Publishing Co.
- Blum, R.W., Resnick, M.D., Nelson, R., & St. Germaine, A. (1991). Family and peer issues among adolescents with spina bifida and cerebral palsy. *Pediatrics*, 88(2). 280-285.
- Bourdieu, P. (1977). The economics of linguistic exchanges. *Social Science Information* 16(6). 645-668.
- Bolton, R. (1979). *People skills*. New York, NY: Simon and Schuster.
- Bornman, J., & Bryen, D.N. (2013). Social validation of vocabulary selection: Ensuring stakeholder relevance. *Augmentative and Alternative Communication*, 29(2). 174-181.

- Brewster, S. (2004). Putting words into their mouths? Interviewing people with learning disabilities and little/no speech. *British Journal of Learning Disabilities*, 32(4), 166-169.
- Brinton, B., Fujiki, M., Spencer, J.C., Robinson, L.A. (1997) The ability of children with specific language impairment to access and participate in an ongoing interaction. *Journal of Speech, Language, and Hearing Research*, 40(5). 1011-1026.
- Brown, P., & Levinson, S. (1987). *Universals in language usage: Politeness phenomena*. Cambridge, UK: Cambridge University Press.
- Bruner, J. (1983). *Child's talk-learning to use language*. New York, NY: Oxford University Press.
- Burke, P.J. (1980). The self: Measurement implications from a symbolic interactionist perspective. *Social Psychology Quarterly*, 43.18-29.
- Burke, P.J. (1991). An identity theory approach to commitment. *Social Psychology Quarterly*, 54. 239-251.
- Burke, P.J. (1991). Identity processes and social stress. *American Sociological Review*, 56. 836-849.
- Burke, P.J. (2006). Identity change. *Social Psychology Quarterly*, 69. 81-96.
- Burke, P. J., & Stets, J.E. (2009) *Identity Theory*. New York, NY: Oxford University Press.
- Burke, P.J., & Stets, J.E. (1999). Trust and commitment through self-verification. *Social Psychology Quarterly*, 62. 347-366.
- Campbell, J. (2011) Understanding Gayatri Spivak (Youtube video). Retrieved from <https://youtu.be/5hylNqGYKIU>

- Carlsson, E., Paterson, B.L., Scott-Findlay, S., Ehnfors, M., & Ehrenberg, A. (2007) Methodological issues in interviews involving people with communication impairments after acquired brain damage. *Qualitative Health Research, 17*(10). 1361-1371. doi: 10.1177/1049732307306926
- Cast, A.D., Stets, J.E., & Burke, P.J. (1999). Does the self conform to the views of others? *Social Psychology Quarterly, 62*. 68-82.
- Cheour, M., Ceponiene, R., Lehtokoski, A., Luuk, A., Allik, J., Alho, K., & Näätänen, R. (1998). Development of language-specific phoneme representations in the infant brain. *Nature Neuroscience, 1*(5). 351-353.
- Clarke, M., Bloch, S., & Wilkinson, R. (2013). Speaker transfer in children's peer conversation: Completing communication-aid-mediated contributions. *Augmentative and Alternative Communication, 29*(1). 37-53.
- Collier, B., McGhie-Richmond, D., Odette, F., & Pyne, J. (2006). Reducing the risk of sexual abuse for people who use augmentative and alternative communication. *Augmentative and Alternative Communication, 22*(1). 62-75.
- Conger, J.A., & Kanungo, R.N. (1988). The empowerment process: Integrating theory and practice. *Academy of Management Review, 13*, 471-482.
- Coombs, W.T. (2007). Attribution theory as a guide for post-crisis communication research. *Public Relations Review, 33*(2). 135-139.
- Creswell, J.W. (2007) *Qualitative inquiry and research design: Choosing among five approaches* (2nd ed.) Thousand Oaks, CA: Sage.

- D'Amico, J.S., & Nelson, R. (2005). Reading and reading impairments. In J.S. D'Amico, N. Muller, & M.J. Ball (Eds), *The handbook of language and speech disorders* (pp. 267-295). Wiley-Blackwell.
- DeCasper, A., & Spence, M. (1986). Prenatal maternal speech influences newborn's perception of speech sounds. *Infant Behavior and Development*, 9, 133–150.
- Dempsey, I., & Foreman, P. (2006). Toward a clarification of empowerment as an outcome of disability service provision. *International Journal of Disability, Development and Education*, 44(4). 287-303.
- Diener, B.L., & Bischof-Rosario, J.A. (2004). Determining decision-making capacity in individuals with severe communication impairment after stroke: The role of augmentative-altering communication (AAC). *Topics in Stroke Rehabilitation*, 11(1). 84-88.
- Disability Advisory Council of Australia. (1993). *Participation of people with a disability. Report one: Supporting empowerment; developing participation*. Canberra: Author.
- Dowling, M. (2005) From Husserl to van Manen. A review of different phenomenological approaches. *International Journal of Nursing Studies*, 44(1). 131-142.
- Douglas, J.M. (2010). Relation of executive functioning to pragmatic outcome following severe traumatic brain injury. *Journal of Speech, Language, and Hearing Research*, 53(2). 365-383.
- Drew, N. (1995). *Learning the Skills of Peacemaking*, Rolling Hills Estates, CA: Jalmar Press.

- Duffy, M.E. (1985). Designing nursing research: The qualitative-quantitative debate. *Journal of Advanced Nursing, 10*. 225-232.
- Dunst, C.J., Trivette, C.M., Gordon, N.J., & Pietcher, L.L. (1989). Building and mobilizing informal family support networks. In G.H.S. Singer, & L.K. Irvin (Eds.), *Support for caregiving families: Enabling positive adaptation to disability* (pp. 121-141). Baltimore, MD: Paul H. Brookes.
- dysarthria. American Speech and Hearing Association (2014). Retrieved from <http://www.asha.org/public/speech/disorders/dysarthria>
- Farrar, P. (1996). End the silence: Preventing the sexual assault of women with communication disorders. Calgary, AB: Technical Resource Center, The University of Calgary.
- empower. (2014). In *OxfordDictionary.com*. Retrieved on February 27, 2014 from http://www.oxforddictionaries.com/us/definition/american_english/empower
- Ferm, U., Ahlsén, E., and Björck-Åkesson, E. (2005). Conversational topics between a child with complex communication needs and her caregiver at mealtime. *Augmentative and Alternative Communication, 21*(1). 19–40.
- Fifer, W. P., & Moon, C. M. (1995). The effects of fetal experience with sound. In J. P. Lecanuet, W. P. Fifer, N. A. Krasnegor, & W. P. Smotherman (Eds.), *Fetal development: A psychobiological perspective* (pp. 351–366). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Folger, J.P., Poole, M.S., & Stutman, R.K. (2001). *Working Through Conflict* (6th ed). New York, NY: Longman.

Formal Request for National Coverage Decision For Augmentative and Alternative Communication Devices (1999). Retrieved from

<http://www.augcominc.com/whatsnew/medicare.html>

Fujiki, M., Brinton, B., & Todd, C.M. (1996). Social skills of children with specific language impairment. *Language, Speech, and Hearing Services in Schools, 27*. 195-202.

Gadamer, H.G. (2004). *Truth and Method*. Trans. Barden, G. and Marshall, D.G. 3rd ed. London, England: Continuum.

Gertner, B. L., Rice, M. L., & Hadley, P. A. (1994). Influence of communicative competence on peer preferences in a preschool classroom. *Journal of Speech and Hearing Research, 37*. 913-923.

Goodwin, C. (1995). Co-constructing meaning in conversation with an aphasic man. *Research on Language and Social Interaction, 28*. 233-260.

Goodwin, C. (2004). A competent speaker who can't speak: The social life of aphasia. *Journal of Linguistic Anthropology, 14*(2). 151-170.

Guba, E.G. (1981). Criteria for assessing the trustworthiness of naturalistic inquiries. *Educational Resources Information Center Annual Review Paper, 29*. 75-91.

Guralnick, M.J., Gottman, J.M., & Hammond, M.A. (1996). Effects of social setting on the friendship formation of young children differing in developmental status. *Journal of Applied Developmental Psychology, 17*. 625-651.

Halliday, M.K.A. (1975). *Learning How to Meaning: Explorations in the Development of Language*. New York, NY: Elsevier North Holland Inc.

- Halloran, W.D. (1993). Transition services requirement: Issues, implications, challenge. In R.C. Eaves, & P.J. McLaughlin (Eds.), *Recent advances in special education and rehabilitation* (pp. 210-224). Boston, MA: Andover Medical Publishers.
- Harman, G. (1999, January). Moral philosophy meets social psychology: Virtue ethics and the fundamental attribution error. In *Proceedings of the Aristotelian society* (pp. 315-331). Aristotelian Society.
- Heidegger, M. (1962). *Being and Time* (J. Macquarrie, & E. Robinson, Trans.). New York, NY: Harper and Rowe.
- Hein, S. F., & Austin, W. J. (2001). Empirical and hermeneutic approaches to phenomenological research in psychology: A comparison. *Psychological Methods*, 6(1), 3-17.
doi:<http://dx.doi.org.ezproxylocal.library.nova.edu/10.1037/1082-989X.6.1.3>
- Heller, M. (1987). The role of language in the formation of ethnic identity. In J. Phinney, & M. Rotheram (Eds.), *Children's ethnic socialization* (pp. 180-200). Newbury Park, CA: Sage.
- Hengst, J.A. (2003). Collaborative referencing between individuals with aphasia and routine communication partners. *Journal of Speech, Language, and Hearing Research*, 46(4). 831- 848.
- Hewes, G. (1993) A History of speculation on the relation between tools and language, In K.R. Gibson, & T. Ingold. (Eds), *Tools, Language and Human Cognition in Human Evolution* (pp. 3-20). New York, NY; Cambridge University Press.

- Hormeyer, I., & Renner, G. (2013). Confirming and denying in co-construction processes: A case study of an adult with cerebral palsy and two familiar partners. *Augmentative and Alternative Communication, 29*(3). 259-271.
- Husserl, E. (1931). *Ideas*. (W.R. Boyce Gibson, Trans.). London, England: George Allen and Unwin.
- Hustad, K.C. (2007) Contribution of two sources of listener knowledge to intelligibility of speakers with cerebral palsy. *Journal of Speech, Language, and Hearing Research, 50*(50). 1228-1241.
- Hustad, K.C., & Gearhart, K.J. (2004). Listener attitudes toward individuals with cerebral palsy who use speech supplementation strategies. *American Journal of Speech-Language Pathology, 13*(2). 168-182.
- Hustad, K.C., Jones, T., & Dailey, S. (2003). Implementing speech supplementation strategies: Effects on intelligibility and speech rate of individuals with chronic severe dysarthria. *Journal of Speech, Language, and Hearing Research, 46*(2). 462-474.
- Iverson, J.M., & Goldin-Meadow, S. (2004). Gesture paves the way for language development. *Psychological Science, 16*(5). 367-371.
- Jefferson, G. (1989). Preliminary notes on a possible metric which provides for a 'standard maximum' silence of approximately one second in conversation . In D. Roger & P. Bull (Eds.), *Conversation: An interdisciplinary approach* (pp.166-196). Philadelphia, PA: Multilingual Matters Ltd.
- Joanette, Y., & Ansaldo, A.I. (1999). Clinical Note: Acquired pragmatic impairments and aphasia. *Brain and Language, 68*(3). 529-534.

- Katz, N.H., Lawyer, J.W., & Sweedler, M.K. (2010). *Communication and conflict resolution skills, 2nd ed.* Dubuque, IO: Kendall/Hunt Publishing.
- Keen, D., Sigafos, J., & Woodyatt, G. (2005). Teacher responses to the communicative attempts of children with autism. *Journal of Developmental and Physical Disabilities, 17*(2). 19–33.
- Keintz, C. K., Bunton, K., & Hoit, J.D. (2007). Influence of visual information on the intelligibility of dysarthritic speech. *American Journal of Speech-Language Pathology, 16*(3). 222-235.
- Kirk, J., & Miller, M. (1986). *Reliability and validity in qualitative research.* Beverly Hills, CA: Sage.
- Koch, T. (1999). An interpretive research process: Revisiting phenomenological and hermeneutical approaches. *Nurse Researcher (through 2013), 6*(3), 20. Retrieved from <http://search.proquest.com.ezproxylocal.library.nova.edu/docview/200806755?accountid=6579>
- Koman, L., Smith, B.P., & Shilt, J.S. (2004). Cerebral palsy. *The Lancet, 363*. 1619-1631.
- Krefting, L. (1990). Rigor in qualitative research: The assessment of trustworthiness. *The American Journal of Occupational Therapy, 45*(3). 214-222.
- Laures-Gore, J.S., DuBay, M.F., Duff, M.C., & Buchanan, T.W. (2010). Identifying behavioral measures of stress in individuals with aphasia. *Journal of Speech, Language, and Hearing Research, 53*(5). 1394-1402.
- Laursen, B., Finkelstein, B.D., & Betts, N.T. (2001). A developmental meta-analysis of peer conflict resolution. *Developmental Review, 21*(4). 423-449.

- Lincoln, Y.S., & Guba, E.A. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage.
- Light, J. (1988). Interaction involving individuals using augmentative and alternative communication: State of the art and future research directions. *Augmentative and Alternative Communication*, 4. 66–82.
- Light, J. (1997). “Communication is the essence of human life”: Reflections on Communicative Competence. *Augmentative and Alternative Communication*, 13. 61-69.
- Light, J., & Drager, K. (2007). AAC technologies for young children with complex communication needs: State of the science and future research directions. *Augmentative and Alternative Communication*, 23(3). 204-216.
- Lindblom, B. (1990). On the communication process: Speaker-listener interaction and the development of speech. *Augmentative and Alternative Communication*, 6. 220–230.
- Levine, M. (2006). *The Price of Privilege*. New York, NY: HarperCollins Publishers.
- Love, R.J. (1992). *Childhood Motor Speech Disability*. New York, NY: MacMillan Publishing Company;
- Lucy, J. A. (1992). *Language, diversity, and thought: A reformulation of the linguistic relativity hypothesis*. Melbourne, Australia: Cambridge University Press.
- Lukes, S. (1974). *Power: A radical view*. London, England: MacMillan.
- Marshall, R.C. (1998). An introduction to supported conversation for adults with aphasia: perspectives, problems and possibilities. *Aphasiology*, 12(9). 811-864.
- Marshall, R.C., Freed. D.B., & Phillips, D.S. (1997). Communicative efficiency in aphasia. *Aphasiology*, 11(4/5). 373-384.

- Martin, J. E., & Marshal, L. H. (1995). Choice maker: A comprehensive self-determination transition program. *Intervention in School and Clinic, 30*. 147-156.
- McCall, G. (2003). The me and the not-me: Positive and negative poles of identity. In P.J. Burke, T.J. Owens, R.T. Serpe, and P.A. Thoits (Eds) *Advances in Identity Theory and Research*, New York, NY: Kluwer Academic/Plenum.
- McCall, G.J., & Simmons, J.L. (1978). *Identities and interactions*. New York, NY: Free Press.
- McCormack, J., McLeod, S., McAllister, L., & Harrison, L. J. (2010). My speech problem, your listening problem, and my frustration: The experience of living with childhood speech impairment. *Language, Speech and Hearing Services In Schools, 41*(4). 379-394.
- McNaughton, D., & Light, J. (2013). The iPad and mobile technology revolution: Benefits and challenges for individuals who require augmentative and alternative communication. *Augmentative and Alternative Communication, 29*(2). 107-116.
- Medina, J. (2014). *Brain rules: 12 principles for surviving and thriving at work, home, and school*. Seattle, WA: Pear Press.
- Mehrabian, A. (1968). Communication without words. *Psychology Today, 2*. 53-55.
- Miller, J.B. (1983). Women and power. *Social Policy, 13*(4), 3-6.
- Moon, C., Cooper, R., & Fifer, W. (1993). Two-day-olds prefer their native language. *Infant Behavior and Development, 16*. 495–500.
- Moustakas, C (1994) *Phenomenological Research Methods*. London, England: Sage.
- Munhall, P.L. (2007). *Nursing research: A qualitative perspective* (4th ed.). Boston, MA: Jones & Bartlett.

- Murray, L., & Trevarthen, C. (1986). The infant's role in mother–infant communications. *Journal of child language*, 13(01), 15-29.
- OLPC Aphasia. (n.d.). Retrieved July 20, 12 from OLPC Wiki:
<http://en.wikipedia.org/wiki/Aphasia>
- OLPC Pragmatics (n.d.). Retrieved July 20, 12 from OLPC Wiki:
<http://en.wikipedia.org/wiki/Pragmatics>
- Nisbett, R.E., & Ross, L. (1980). *Human inference: Strategies and shortcomings of social judgment*. Englewood Cliffs, NJ: Prentice-Hall.
- Parsons, R. (1991). Empowerment: Purpose and practice principle in social work. *Social Work with Groups*, 14(2), 7-21.
- Patel, R., & Campellone, P. (2009). Acoustic and perceptual cues to contrastive stress in dysarthria. *Journal of Speech, Language, and Hearing Research*, 52(10). 206-223.
- Peirce, B.N. (1995). Social identity, investment, and language learning. *TESOL Quarterly*, 29(1). 9-32.
- Pennington, L., Thomson, K., James, P., Martin, L., & McNally, R. (2009). Effects of it takes two to talk-The hanen program for parents of preschool children with cerebral palsy: findings from an exploratory study. *Journal of Speech, Language, and Hearing Research*, 52(2). 1121-1139.
- Powers, W.T. (1973). *Behavior: The control of perception*. Chicago, IL: Aldine.
- Pringle, J., Drummond, J., McLafferty, E., & Hendry, C., (2011). Interpretive phenomenological analysis: A discussion and critique. *Nurse Researcher*, 18(3). 20-24.

- Pruitt, D., & Kim, S. H. (2004). *Social conflict: Escalation, stalemate, and settlement* (3rd ed). New York, NY: McGraw Hill.
- Ramsberger, G., & Menn, L. (2002). Co-constructing lucy: Adding a social perspective to the assessment of communicative success in aphasia. In C. Goodwin (Ed.), *Conversation and brain damage* (pp. 283-303). New York, NY: Oxford University Press.
- Rappaport, J. (1981). In praise of paradox: A social policy of empowerment over prevention. *American Journal of Community Psychology*, 9, 1-25.
- Flesch-Kincaid Readability Formula. (2011). Retrieved November 9, 2015.
- Reichle, J., & Drager, K.D.R. (2010). Examining issues of aided communication display and navigational strategies for young children with developmental disabilities. *Journal of Developmental and Physical Disabilities*, 22, 289-311.
- Robillard, M., Mayer-Crittenden, C., Roy-Charland, A., Minor-Corriveau, M., & Bélanger, R. (2013). Exploring the impact of cognition on young children's ability to navigate a speech-generating device. *Augmentative and Alternative Communication*, 29(4), 347-359.
- Rogers, C.R. (1980) *A way of being*. New York, NY: Houghton Mifflin.
- Ross, L., & Nisbett, R. (1991). *The person and the situation: Perspectives of social psychology*. New York, NY: McGraw-Hill.
- Rotter, J.B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs*, 80, (1, Whole No. 609).
- Rummel-Hudson, R. (2011). A revolution at their fingertips. *Perspectives on Alternative and Augmentative Communication*, 20(1), 19-23.

- Sandberg, A.D., & Liliedahl, M. (2008) Patterns in early interaction between young preschool children with severe speech and physical impairments and their parents. *Child Language Teaching and Therapy*, 24(1). 9-30.
- Sarason, S.B. (1990). *The predictable failure of educational reform: Can we change course before it's too late?* San Francisco, CA: Jossey Bass.
- Seidman, I. (2013). *Interviewing as qualitative research: A guide for researchers in education and the social sciences*. 4th ed. New York, NY: Teachers College Press.
- Serpe, R.T. (1987). Stability and change in self: A structural symbolic interactionist explanation. *Social Psychology Quarterly*, 50. 44-55.
- Serrano-Garcia, I. (1984). The illusion of empowerment: Community development within a colonial context. In J. Rappaport, C. Swift, & R. Hess (Eds.), *Studies in empowerment: Steps towards understanding and action* (pp. 173-200). New York, NY: Howarth Press.
- Shewan, C. M., & Cameron, H. (1984). Communication and related problems as perceived by aphasic individuals and their spouses. *Journal of Communication Disorders*, 17, 175–187.
- Siegler, L.N. (2007). Discovering communicative competencies in a non-speaking child with autism. *Language, Speech, and Hearing Services in Schools*, 38(4). 400-414.
- Simmons-Mackey, N. Kingston, D., & Schultz, M. (2004). “Speaking for another”: The management of participant frames in aphasia. *American Journal of Speech Language Pathology*, 13(2). 114-127.
- Simon, B.L. (1990). Rethinking empowerment. *Journal of Progressive Human Services*, 1(1), 27-39.

- Smith, J.A. (2004). Reflecting on the development of interpretive phenomenological analysis and its contribution to qualitative research in psychology. *Qualitative Research in Psychology, 1*(1). 39-54.
- Smith, J.A., & Osborn, M. (2008). Interpretive phenomenological analysis. In J. A. Smith (Ed.), *Qualitative Research Methods A Practical Guide to Research Methods* (pp. 53-80). London, England: SAGE Publications Ltd.
- Sobsey, D. (1994). *Violence and abuse in the lives of people with disabilities: The end of silent acceptance*. Baltimore, MD: Paul H. Brookes.
- Solomon, B.B. (1976). *Black empowerment: Social work in oppressed communities*. New York, NY: Columbia University Press.
- Solomon, B.B. (1987). Empowerment: Social work in oppressed communities. *Journal of Social Work Practice, 2*, 79-91.
- Spence, M., & DeCasper, A.(1987). Prenatal experience with low-frequency maternal voice sounds influence neonatal perception of maternal voice samples. *Infant Behavior and Development, 10*. 133-142.
- Spiegelberg, H. (1982). *The phenomenological movement* (3rd Ed). The Hague, Netherlands: Martinus Nijhoff.
- Strasser, S. (1965). Phenomenologies and psychologies. *Review of Existential Psychology and Psychiatry, 5*, 80-105.
- Stewart, K., & Williams, M. (2005). Researching online populations: The use of online focus groups for social research. *Qualitative Research, 5*(4). 395-416.
- Stets, J.E., & Burke, P.J. (2005). Identity verification, control, and aggression in marriage. *Social Psychology Quarterly, 68*. 160-178.

- Stevens, L.J., & Bliss, L.S. (1995). Conflict resolution abilities of children with specific language impairment and children with normal language. *Journal of Speech, Language, and Hearing Research, 38*(3). 599-611.
- Stone, D., Patton, B., & Heen. S. (1999). *Difficult Conversations*. New York, New York: Penguin Books.
- Stryker, S, & Burke, P.J. (2000). The past, present, and future of an identity theory. *Social Psychology Quarterly, 63*. 284-297.
- Stryker, S., and Serpe, R.T. (1994). Identity salience and psychological centrality: Equivalent, overlapping, or complementary concepts? *Social Psychology Quarterly, 57*. 16-35.
- Taibo, M.L.G., Iglesias, P.V., Raposo, M.D.G., & Mendez, M.S. (2010). An exploratory study of phonological awareness and working memory differences and literacy performance of people that use AAC. *The Spanish Journal of Psychology, 13*(2). 538-557.
- Tannen, D. (1992). *That's not what i meant! How conversational style makes or breaks relationships*. New York, NY: Ballantine.
- Tannock, R., Girolametto, L., & Siegel, L. S. (1992). Language intervention with children who have developmental delays: Effects of an interactive approach. *American Journal of Mental Retardation, 97*. 145–160.
- Thistle J.J., & Wilkinson, K. (2012). What are the attention demands of aided AAC? *Perspectives on Alternative Communication, 21*. 17-21.
- Tiryakian, E.A. (1965). Existential phenomenology and the sociological tradition. *American Sociological Review, 30*(5), 674-688.

- United States Society for Augmentative and Alternative Communication. (2013).
Retrieved from <http://www.ussaac.org/aboutaac.htm>.
- Ury, W. (1991). *Getting past no*. New York, NY: Bantam Books.
- Voegtline, K.M., Costigan, K.A., Pater, H.A., & DiPietro, J.A., (2012). Near-term fetal response to maternal spoken voice. *Infant Behavior and Development, 36*(4). 526-533.
- Weedon, C. (1987). *Feminist practice and poststructuralist theory*. London, England: Blackwell.
- Wehmeyer, M. L. (1994). Perceptions of self-determination and psychological empowerment of adolescents with mental retardation. *Education & Training in Mental Retardation & Developmental Disability, 29*, 9-21.
- Wehmeyer, M.L., Sands, D.J., Doll, B., & Palmer, S. (1997). The development of self-determination and implications for educational interventions with students with disabilities. *International Journal of Disability, Development and Education, 44*(4). 305-328.
- Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review, 92*(4). 548-573.
- Willis, J.W. (2007). *Foundations of qualitative research: Interpretive and critical approaches*. Thousand Oaks, CA: Sage.
- Whaley, B.B. & Parker, R.G. (2000). Expressing the experience of communicative disability: metaphors of persons who suffer. *Communication Reports, 13*(2). 115-126.

Zanna, M., & Cooper, J. (1976). Dissonance and the attribution process. In J. H. Harvey, W. J. Ickes, & R. F. Kidd. (Eds.), *New directions in attribution research*. (pp. 199-211). Hillsdale, NJ: Erlbaum.

Zimmerman, M. (1990). Taking aim on empowerment research: On the distinction between individual and psychological conceptions. *American Journal of Community Psychology*, 18, 169-177.

Appendix A: Greeting Letter & Study Overview

Hello,

My name is Amy Parker and I am a doctoral candidate at Nova Southeastern University. As part of my dissertation research, I am conducting a study on conflict behaviors and beliefs of those who use external augmentative and alternative communication devices. The purpose of the study is to determine if external augmentative and alternative communication devices increase miscommunication resulting in conflict or impact typically developing conflict. I am seeking individuals who would be willing to participate in this research project. If you are interested and would like to learn more about my study, please contact me at the email address listed below. Should you have any additional questions or concerns, do not hesitate to reach out to me for further information or explanation.

Amy Ross Parker

For questions/concerns about your research rights, contact:
Human Research Oversight Board (Institutional Review Board or IRB)
Nova Southeastern University
(954) 262-5369/Toll Free: 866-499-0790
IRB@nsu.nova.edu

Appendix B: Informed Consent Adult/General



Informed Consent Form Adult/General in the Research Study Entitled

Conflict Resolution Behaviors and the Affect of Identity Standards and Empowerment Needs on Individuals Using External Augmentative and Alternative Communication Devices

Funding Source: None.

IRB Protocol No.

Principal investigator
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IRB@nsu.nova.edu

Introduction

You are being asked to participate in a research study being conducted for a dissertation at Nova Southeastern University in Fort Lauderdale, Florida. Before agreeing to participate in this research study, it is important that you read the following explanation of this study. This document describes the purpose, procedures, benefits, risks, discomforts, and precautions of the program. Also described is your right to withdraw from the study at any time. No guarantees or assurances can be made as to the results of the study.

What is the study about?

The study is a research project designed to explore the impact of external augmentative and alternative communication augmentative and alternative communication devices on conflict development and resolution.

Why are you asking me?

I am asking you to participate because of your direct experience as an external augmentative and alternative communication user. You have a unique perspective and understanding of this phenomenon and I am interested in learning about your experiences and perceptions regarding conflict.

What will I be doing if I agree to be in the study?

The research approach is an interview. You will be asked 12 open-ended questions. At the conclusion of the interview, you will be asked if you have any additional questions or comments. The length and depth of the interview is entirely up to you. In addition, you have the right to withdraw from this study at any time.

Is there any audio or video recording?

All interviews will be audio recorded using a digital voice recorder. The recordings will be available only to the researcher, the dissertation committee, the IRB, and you. No one else will have access to the recording without your express written and/or verbal consent. Recordings will be stored in a secure location within the researcher's home and will be commercially destroyed after 3 years. Although recorded voices will be produced by speech generating devices, recordings may identify you. Thus, complete confidentiality with regard to recordings cannot be guaranteed. However as previously mentioned, access to recordings will be limited.

What are the dangers to me?

The dangers to you are minimal, meaning they are no greater than other risks you experience every day. Your responses to interview questions will be kept confidential, and will only be used for the purposes of this research study. However discussing conflict or thinking of your own experience during a conflict may cause you to feel anxious or uncomfortable. Should you feel any discomfort, stress, or frustration during the interview process, please let me know and I will do my best to address your feelings. You are also free to withdraw from this research project at any time.

If you have any questions or concerns about the research, your research rights, or have a research-related injury or problem, please contact Amy Ross Parker at 609-346-4272, or Dr. Cheryl Duckworth at 954-262-3018. You may also contact the IRB at the numbers indicated above with questions as to your research rights.

Are there any benefits for taking part in this research study?

This study may help you understand your approach conflict and how it affects you. It may also impact the way you approach conflict and conflict resolution in future.

Will I get paid for being in the study? Will it cost me anything?

There are no costs to you however you will receive a \$25 Visa gift card for participating in this study. Payment will be made at the end of the interview.

How will you keep my information private?

Maintaining participant confidentiality is very important to this study. Therefore, secure procedures have been established in order to protect the identity of participants and minimize potential harm. The following procedures will be used to insure confidentiality:

- I will not use your name unless you give permission for me to do so. The only exception to this rule of confidentiality is when law requires disclosure.
- Your identity as a participant will not be shared with unauthorized persons; only the researchers and the Nova Southeastern University Institutional Review Board (the committee that approved this research project) will have access to the research materials.
- All electronic data will be saved in a password-protected computer accessible only to the PI.
- All materials will be kept in a locked safe for a period of 60 months.
- Any references to your identity that could potentially compromise your anonymity will be removed or disguised prior to the preparation of the research reports and publications.

What if I do not want to participate or I want to leave the study?

Participation in this study is voluntary. You are free to withdraw consent and discontinue participation at any time, for any reason. I will answer any questions about the research at any point in the process. Any information or contribution you make to the study will be kept for 60 months, but will be excluded at your request.

Other Considerations:

I will immediately share any new information regarding the study that might impact your willingness to continue to participate

Voluntary Consent by Participant:

By signing below, you indicate that

- this study has been explained to you
- you are at least 18 years of age
- you understand written English and have read this document or it has been read to you
- your questions about this research study have been answered
- you have been told that you may ask the researchers any study related questions in the future or contact them in the event of a research-related injury
- you have been told that you may ask Institutional Review Board (IRB) personnel questions about your study rights
- you are entitled to a copy of this form after you have read and signed it
- you voluntarily agree to participate in the study entitled “Conflict Resolution Behaviors and the Affect of Identity Standards and Empowerment Needs on Individuals Using External Augmentative and alternative communication Devices”

Legal Representative's Signature: _____ Date: _____

Legal Representative's Name: _____ Date: _____

Participant's Name: _____ Date: _____

Witness Signature: _____ Date: _____

Witness Name: _____ Date: _____

Signature of Person Obtaining Consent: _____

Date: _____

Appendix C: Informed Consent Legal Representative/Guardian



**Informed Consent Form for Legal Representative/Guardian in the Research Study
Entitled**

**Conflict Resolution Behaviors and the Affect of Identity Standards and
Empowerment Needs on Individuals Using External Augmentative and Alternative
Communication Devices**

Funding Source: None.

IRB Protocol No.

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For questions/concerns about your research rights, contact:
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IRB@nsu.nova.edu

Introduction

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I am asking your permission for your ward to participate because of their direct experience as an external augmentative and alternative communication user. They have a unique perspective and understanding of this phenomenon and I am interested in learning about their experiences and perceptions regarding conflict.

What will I be doing if I agree to be in the study?

The research approach is an interview. Participants will be asked 12 open-ended questions. At the conclusion of the interview, they will be invited to share any additional questions and comments. The length and depth of the interview is entirely up to the participant you. In addition, both you and your ward have the right to withdraw from this study at any time.

Is there any audio or video recording?

All interviews will be audio recorded using a digital voice recorder. The recordings will be available only to the researcher, the dissertation committee, the IRB, and your ward and you. No one else will have access to the recording without your express written and/or verbal consent. Recordings will be stored in a secure location within the researcher's home and will be commercially destroyed after 3 years. Although recorded voices will be produced by speech generating devices, recordings may identify your ward. Thus, complete confidentiality with regard to recordings cannot be guaranteed. However as previously mentioned, access to recordings will be limited.

What are the dangers to me?

The dangers to participants are minimal, meaning they are no greater than other risks one experiences every day. Participant responses to interview questions will be kept confidential, and will only be used for the purposes of this research study. However discussing conflict or thinking of his or her experience during a conflict may cause your ward to feel anxious or uncomfortable. Should they feel any discomfort, stress, or frustration during the interview process, please let me know and I will do my best to address their feelings. They are also free to withdraw from this research project at any time.

If you have any questions or concerns about the research, your or your ward's research rights, or have a research-related injury or problem, please contact Amy Ross Parker at 609-346-4272, or Dr. Cheryl Duckworth at 954-262-3018. You may also contact the IRB at the numbers indicated above with questions as to your research rights.

Are there any benefits for taking part in this research study?

This study may help you and your ward understand how they approach conflict and how it affects them. It may also impact the way they approach conflict and conflict resolution in future.

Will I get paid for being in the study? Will it cost me anything?

There are no costs to you however your ward will receive a \$25 Visa gift card for participating in this study. Payment will be made at the end of the interview.

How will you keep my information private?

Maintaining participant confidentiality is very important to this study. Therefore, secure procedures have been established in order to protect the identity of participants and minimize potential harm. The following procedures will be used to insure confidentiality:

- I will not use your ward's name unless I am given permission to do so. The only exception to this rule of confidentiality is when law requires disclosure.
- The identity of participants will not be shared with unauthorized persons; only the researchers and the Nova Southeastern University Institutional Review Board (the committee that approved this research project) will have access to the research materials.
- All electronic data will be saved in a password-protected computer accessible only to the PI.
- All materials will be kept in a locked safe for a period of 60 months.
- Any references to your ward's identity that could potentially compromise their anonymity will be removed or disguised prior to the preparation of the research reports and publications.

What if I do not want to participate or I want to leave the study?

Participation in this study is voluntary. Participants are free to withdraw consent and discontinue participation at any time, for any reason. I will answer any questions about the research at any point in the process. Any information or contribution your ward makes to the study will be kept for 60 months, but will be excluded at your or your ward's request.

Other Considerations:

I will immediately share any new information regarding the study that might impact your willingness to continue to participate

Voluntary Consent by Participant:

By signing below, you indicate that

- this study has been explained to you
- you are at least 18 years of age
- you understand written English and have read this document or it has been read to you
- your questions about this research study have been answered
- you have been told that you may ask the researchers any study related questions in the future or contact them in the event of a research-related injury
- you have been told that you may ask Institutional Review Board (IRB) personnel questions about your study rights
- you are entitled to a copy of this form after you have read and signed it
- you voluntarily agree to participate in the study entitled "Conflict Resolution Behaviors and the Affect of Identity Standards and Empowerment Needs on

Individuals Using External Augmentative and alternative communication
Devices”

Legal Representative's Signature: _____ Date: _____

Legal Representative's Name: _____ Date: _____

Participant's Name: _____ Date: _____

Witness Signature: _____ Date: _____

Witness Name: _____ Date: _____

Signature of Person Obtaining Consent: _____

Date: _____

Appendix D: Participation Letter Script

Voluntary Consent by Participant:

By affirming “yes” or “no” you indicate that

- this study has been explained to you
- you are at least 18 years of age
- you have read this document or it has been read to you
- your questions about this research study have been answered
- you have been told that you may ask the researchers any study related questions in the future or contact them in the event of a research-related injury
- you have been told that you may ask Institutional Review Board (IRB) personnel questions about your study rights
- you are entitled to a copy of this form after you have read and signed it
- you voluntarily agree to participate in the study entitled “Conflict Resolution Behaviors and the Affect of Identity Standards and Empowerment Needs on Individuals Using External Augmentative and alternative communication Devices”

Participant’s Name: _____ Date: _____

Witness Signature: _____ Date: _____

Witness Name: _____ Date: _____

Signature of Person Obtaining Consent: _____

Date: _____

Appendix E: Participant Research Questions

Participant Research Questions

- Are you a life-long AAC user?
- What is your gender?
- Identity describes how we see ourselves. What are three words you would you to describe you?
- As an external augmentative and alternative communication user, what is it like communicating with those who are unfamiliar with external augmentative and alternative communication?
- Tell me about your augmentative and alternative communication device and its strengths and weaknesses.
- How has your devices affected your life?
- How do emotions impact communication? How do you handle this?
- How does miscommunication impact conflict?
- How does conflict impact communication?
- What is this like for you?
- What does conflict mean to you?
- How do you approach conflict? Conflict resolution?
- How has this affected you?

Appendix F: Participant Flier

Looking for individuals who use external AUGMENTATIVE AND ALTERNATIVE COMMUNICATION devices who would be interested in participating in a research study entitled:

Conflict Resolution Behaviors and the Affect of Identity Standards and Empowerment Needs on Individuals Using External Augmentative and Alternative Communication Devices

Individuals who participate in a short interview will receive a \$25 Visa Gift Card

Email Amy Parker at ap1113@nova.edu for more information!!!

Nova Southeastern University
Institutional Review Board
Graduate School of Humanities and Social Sciences
3301 College Avenue, Fort Lauderdale, Florida 33314-7796
(954)262-3000. 800-262-7978. Fax: (954)262-3968
Email: shss@nsu.nova.edu
<http://shss.nova.edu>

Appendix G: Study Overview Email

Hello,

Thank you for sharing your experiences. My name is Amy Parker and I am a doctoral candidate at Nova Southeastern University. As part of my dissertation research, I am conducting a study on conflict behaviors and beliefs of those who use external augmentative and alternative communication devices. The purpose of the study is to determine if external augmentative and alternative communication devices increase miscommunication resulting in conflict or impact typically developing conflict. I am seeking individuals who would be willing to participate in this research project. If you have any interest, please respond to this email and I will gladly send further information about this study as well as a link to a confidential questionnaire. Regardless, thank you so much for sharing your story. You are an important voice.

Amy Ross Parker

Appendix H: Guide to participant needs and devices

Participant	Length of AAC Use	Device	Level of mobility
Ben	Life long	Pathfinder	Moderately limited
Helen	Life long	Unknown	Moderately limited
Ian	Life long	Computer with EZkeys software	Very limited
Ken	Life long	Lightwriter	Mildly limited
Leo	Following significant medical event	Macbook Pro	Very limited
John	Following significant medical event	Ipad	Mildly limited