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STUDENT PERCEPTIONS OF CONNECTEDNESS AT THE AMERICAN
INTERNATIONAL SCHOOL OF UTAH

by

Diane Longhurst Johnson

A dissertation submitted in partial fulfillment
of the requirements for the degree

of

DOCTOR OF PHILOSOPHY

in

Education

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Logan, Utah

2019

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ABSTRACT

Student Perceptions of Connectedness at the American International School of Utah

by

Diane Longhurst Johnson, Doctor of Philosophy

Utah State University, 2019

Major Professor: James Dorward, Ph.D.
Department: Teacher Education and Leadership

Connectedness has been identified as a powerful protective factor for adolescents. This study focused on the extent to which secondary students at the American International School of Utah (AISU) report perceptions of connectedness. Specifically, this work focused on school-level factors applied to all secondary students within the AISU environment itself. It also examined the extent to which participation in the school-wide interventions of Crew and Intensives influence perceptions of connectedness among AISU secondary students. Data collected provided insights about perceptions of connectedness within the AISU environment that may be used to provide AISU administrators with information about the degree to which current practices are supporting the educational model in the AISU Charter. Further, they seek to identify additional student support needs and improve future implementations of the interventions.

An Explanatory Sequential research design was used. This method included the use of quantitative measure administered and analyzed first, followed by a qualitative

measure used to learn more about the quantitative results. The Hemingway Measure of Adolescent Connectedness Short Form by Michael Karcher served as the quantitative measure for this study. A semistructured interview protocol, created by the researcher, was used as the qualitative instrument.

Results indicated that overall, study participants reported high-levels of connectedness on the Hemingway. Analysis of the Hemingway Subscales revealed that the Friends subscale had the highest levels of connectedness, followed by connectedness to Teacher. Connectedness to School was slightly lower than connectedness to Teachers. Connectedness to Peers showed moderate levels of connectedness.

To learn more about the results of the quantitative stage of this study, Semistructured interviews were conducted and analyzed using traditional deductive coding techniques. Results suggest high-levels of connectedness associated with AISU as a school and with participation in Crew. Findings on the questions asking about Intensives showed that students appear to value the unique learning opportunities and ability to choose what they learn.

This study provided information for AISU administrators about school-wide efforts to infuse connectedness as a Tenet of Democracy established in their charter. The findings related to Crew and Intensives may also be explored as they make plans for future implementation.

PUBLIC ABSTRACT

Student Perceptions of Connectedness at the American International School of Utah

by

Diane Longhurst Johnson, Doctor of Philosophy

Utah State University, 2019

Connectedness has been identified as a powerful protective factor for adolescents. This study focused on the extent to which secondary students at the American International School of Utah (AISU) report perceptions of connectedness. Specifically, this work focused on school-level factors. It examined the extent to which participation in the school-wide interventions of Crew and Intensives influence perceptions of connectedness among AISU secondary students. Data collected provided insights about perceptions of connectedness within the AISU environment that may be used to inform current practices, identify additional student support needs, and improve future implementations.

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Diane Longhurst Johnson

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CHAPTER I

INTRODUCTION

“The reason this school is special is because everyone is from elsewhere, and none of that matters.” A 16-year-old student made this statement in response to a question asking for her thoughts about The American International School of Utah (AISU). It illuminates the powerful need for belonging during adolescent years. Her comment also demonstrates the power of a school environment to build or destroy a child’s sense of connection, capacity, and self-worth. Teenage years are some of the most difficult physically, emotionally, and socially. The developmental complexities of adolescence and the associated influence of a school environment on those complexities, may compel school leaders to seek ways to support teens during this vulnerable time.

Several protective factors have been found to alleviate conditions that can lead to academic, social and emotional challenges faced by adolescents (Benard, 1991; House, 2001; Morales, 2010; Noble & McGrath, 2012; Plagens, 2011). Protective factors are conditions, relationships, skills, or traits that tend to dissuade individuals from participating in harmful or antisocial behaviors or environments (Benard, 1991; House, 2001; Morales, 2010). Some of the most important protective factors are connectedness, opportunities for contribution, participation in positive activities, positive peer interactions, and positive school environments (Baumeister & Leary, 1995; House, 2001; Ito, 2011; McCombs & Miller, 2007; Peters & Woolley, 2015; Resnick et al., 1997).

These protective factors consist of multidimensional attributes each worthy of independent exploration. However, the focus of this study was on connectedness as a

protective factor. This research identified the extent to which perceptions of connectedness were reported by secondary students at AISU. Specifically, it included efforts to learn more about if and how two school-level interventions within the environment of AISU may be contributing to student perceptions of connectedness. The first school-wide intervention is called Crew and is similar to an advisory period. The second is called Intensives which are two-week courses where students choose what they study.

Background

Schools represent different things to different people. For societies, the opportunities for education represent an equalizer. For communities and families, schools function to support the development of social, academic, and career skills needed to perpetuate civil interaction and strong economic conditions. For individuals, schools provide micro-communities where interpersonal skills are developed, interests are discovered, knowledge is gained, skills are applied, and problem solving is practiced. AISU is one such microcommunity.

A K-12 public charter school located in Murray, Utah, AISU is housed in a beautiful facility once known as the 49th Street Galleria. The physical setting of AISU is an open and creative space. In addition to more than 1,300 diverse students from all along the Wasatch Front, AISU's student population includes international students from 19 different countries. In operation for only 4 years, AISU is already becoming well known for its innovative program offerings and individualized learning opportunities.

The educational model used at AISU includes components of competency-based education and project-based learning. Two of the unique features of AISU include school-level interventions known as Crew and Intensives. All secondary students are placed in a Crew when they begin attending AISU. Crews are led by either a teacher or a success coach employed by the school. Most of the time, students remain in the same Crew through the duration of their schooling at AISU. Crews are multi-age groupings that function similarly to an advisory or homeroom group, but are more substantive in the content taught, opportunity for group projects, and development of Crew identity and membership.

Another unique feature of AISU is the use of two-week Intensives through which students earn elective credit. Intensives are held four times per year at the beginning of every term. All secondary students are invited to choose from a selection of 20-30 intensive courses to take. For the 2-week duration of the Intensives, students focus all of their time and effort on studying one topic or skill. By the end of the Intensive, students must complete a learning artifact that is displayed or presented at a Celebration of Learning. Celebration of Learning is similar to a school-wide science fair event where student work is displayed. Examples of intensive topics include graphic design, 3-D printing, sound design mixing, homelessness studies, refugee issues, geology through hiking, game strategy theory, entrepreneurship, etc. All students must participate in a credit bearing Intensive, and attendance is required.

Schools as Social-Emotional Ecosystems

Schools, both public and private, can be places of refuge or places of risk for

adolescents. Factors within a school's physical, academic, and social environments have significant influence on whether a student perceives school as a safe place or as a danger zone (Bonny, Britto, Klostermann, Hornung, & Slap, 2000; Eccles, 2003; Eccles & Roeser, 2011; House, 2001; Odden-Heide, 2015; Van Ryzin, 2011). Several protective factors have been found to promote an emotionally, socially, and physically safe environment. These include positive self-esteem, productive coping skills, connectedness, healthy peer relationships, academic success, healthy interactions with adults inside and outside of school, and the ability to articulate feelings and needs. Additionally, for adolescents, some of the most significant protective factors are connectedness, opportunities for contribution, autonomy, participation in positive activities, positive peer interactions, and positive school environments (Baumeister & Leary, 1995; House, 2001; McCombs & Miller, 2007; Odden-Heide, 2015; Resnick et al., 1997).

Experienced secondary school leaders recognize that implementing effective school-wide interventions is essential in promoting the development of protective factors and building supportive environments for students (Marzano, 2003; Sammons, Toth, & Sylva, 2015; Scheerens, Luyten, & Van Ravens, 2011). Marzano includes such interventions in a category he calls "school-level factors." Moreover, Sammons et al. found that providing more opportunities for students to engage in self-directed study, and enrichment activities beyond core academic subjects also effectively improves overall performance in school.

Further contributing to the need for effective school-wide interventions Scheerens et al (2011) concluded that positive relationships within classrooms consistently influenced student learning, social interaction, and better behavioral outcomes. They

further asserted that the “fun factor” within a school environment is important to satisfaction and performance. Fun factors include opportunities to chat with teachers and other students in a casual way, or participation in nonacademic games or fun activities. These also include the sharing of appropriate funny jokes or stories, and teachers showing sympathetic interest in children other than as learners, as well as students participating in and achieving shared goals such as service projects, school competitions, and celebrations. This research supports several of the features inherent in AISU Crew and Intensives.

Accomplishing the Goals of the AISU Charter

AISU’s Charter focuses on personalization of education to promote students being at the center of their own learning rather than reliance on the traditional teacher-led models. Indicators articulated in the Charter include (a) personalized and accelerated learning that results in improved academic performance (b) personally invested student performance and production that demonstrates educational involvement beyond core requirements, and (c) global awareness and engagement. Further, among the stated purposes included in AISU’s Charter is the use of innovative teaching methods and increased student choice in their own learning opportunities.

AISU’s Charter also includes the use of a student-centered educational framework that includes (a) principles of learning (b) information processing (c) content standards (d) tenets of democracy. There are numerous elements of the framework as represented in Figure 1.

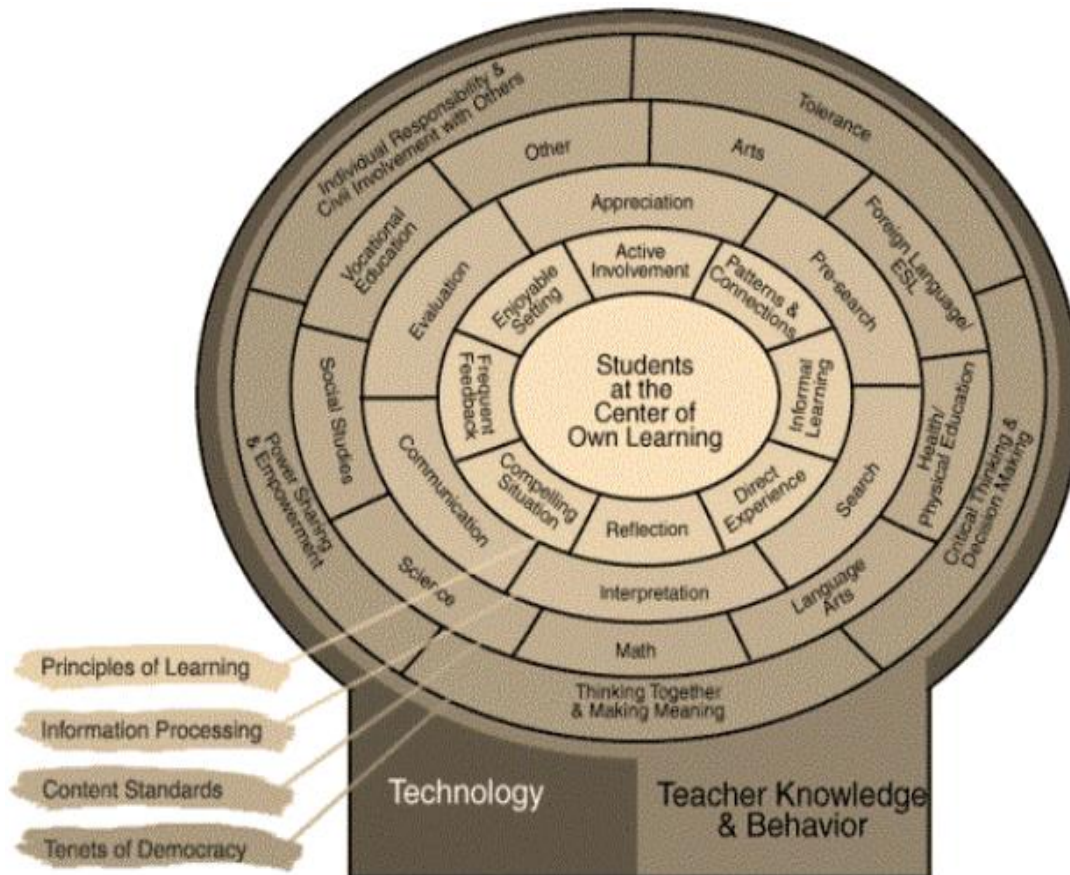


Figure 1. AISU educational framework.

The Tenets of Democracy include (a) individual responsibility and civil involvement with others (b) tolerance (c) critical thinking and decision making (d) thinking together and making meaning, and (e) power sharing and empowerment. Members of the AISU administration were aware that intangible concepts like those included in Tenets of Democracy tend to be difficult to measure through traditional means. Without a way to measure Tenets of Democracy knowledge and skill attainment, AISU administrators recognized that they could not determine the degree to which they were achieving the goals of AISU Charter with respect to this part of their educational

framework. To that end, administrators tasked researchers to design and implement a study to provide them data on their progress on achieving their goals related to Tenets of Democracy.

AISU administrators believe that various direct and indirect factors within the AISU academic and social environment promote the Tenets of Democracy outlined in the Charter educational framework. AISU's administration was interested in learning the extent to which Tenets of Democracy were present generally among their students. More importantly, they wanted to know the degree to which two specific school-level interventions were promoting the attitudes and behaviors associated with the Tenets of Democracy. The school-level interventions AISU administrators were most interested in were Crew and Intensives.

Administrators recognized that secondary students have the cognitive and emotional capacity to understand and speak about complex intangible concepts such as tolerance, power sharing, empowerment, civil involvement, and making meaning. Since Crew and Intensives had been fully implemented at the middle and high school levels, the AISU administration determined that study on the secondary student population was prudent at this time.

Further, in order to study the constructs within the Tenets of Democracy, the AISU administration was cognizant that the complex intangible nature would require focus on specific views, attitudes, beliefs, and behaviors. To accomplish this, they worked with the researchers to identify and focus the study on prominent elements inherent within Tenets of Democracy.

Examining each one of the five Tenets individually was considered. However, due to the integrated nature of Crew and Intensives, AISU administrators determined that it would be more meaningful to identify common themes across the five factors of Tenets of Democracy then prioritize the more important ones to study. Administrators considered a variety of possible themes such as interpersonal skills, empathy, self-confidence, vulnerability, compassion, connectedness, awareness of consequences, self-reflection, communication skills, teamwork, respect for diversity, power dynamics, decision making processes, and civility. Given the goals of their Charter, AISU administration determined that studying connectedness would provide insight across all five dimensions of the Tenets of Democracy and be a good place to begin data collection to measure their progress toward these Charter goals.

Factors that contributed to the decision to study connectedness first was that it linked with the concepts within AISU's particular operational definition of Tenets of Democracy. For example, connectedness is associated with tolerance of others and openness to disparate viewpoints (Chen, Urminsky & Bartels, 2016; M. Lee, Draper, & Lee, 2001). Additionally, as a protective factor, connectedness has been found to influence decision making (Bartels & Urminski, 2015; Joshi & Fast, 2013, Van Gelder, Hershfield, & Nordgren, 2013; M. Zhang & Aggarwal, 2015). Connectedness is also identified as necessary for productive collaboration with others to accomplish tasks or with meaning making (Fifolt, Morgan, & Burgess, 2018; Lee et al., 2001). Similarly, feelings of personal empowerment are interrelated with perceptions of connectedness (Chen et al., 2016; Dai, Milkman, & Riis, 2015; Kraus & Cleveland, 2016). Based on

these considerations, AISU administration directed the researcher to design and conduct a study on the degree to which perceptions of connectedness are manifest among secondary students. The goal was to begin to gather valid data on AISU's progress toward meeting the goals of its Charter with regard to its educational framework.

Purpose Statement

The purpose of this investigation was to study the extent to which secondary students at AISU report perceptions of connectedness. Specifically, this work examined the extent to which participation in the school-level factors of Crew and Intensives is associated perceptions of connectedness among secondary students. Data collected provided insights about the degree to which AISU is meeting the goals of its Charter with regard to Tenets of Democracy, of which connectedness is a feature.

Research Questions

RQ1. To what extent do AISU students report perceptions of connectedness?

RQ2. To what extent does participation in Crew promote perceptions of connectedness among secondary students?

RQ3. To what extent does participation in Intensives promote perceptions of connectedness among secondary students?

Significance of Study

Literature on school connectedness associated with adolescence arose out of

several disciplines besides education including psychology, sociology, medicine, and health (Blum, 2005; Carver, Elliott, & Kennedy, 2017; Schwerdtfeger-Gallus, Shreffler, Merten, & Cox, 2015). Studies were initially focused on examining the links between connectedness and other important adolescent outcomes. For example, connectedness as associated with risk-taking behavior was studied extensively (Blum, 2005; Carver et al., 2017; Chapman, Buckley, Sheehan, & Shochet, 2013; Giano et al., 2018; Golaszewski et al., 2018; Schwerdtfeger et al., 2015; Sieving et al., 2017).

Beginning in the early 1990s, a three-fold surge in research activities related to adolescent school connectedness began and continued in earnest until 2002 (Chapman, Buckley, Sheehan, & Shochet, 2013). Beyond 2002, research on adolescent school connectedness expanded to include relationships between connectedness and academic engagement, school violence, bullying, family relationships, community involvement, pro-social behaviors, team work, and participation in extracurricular activities (Karcher, 2011; Law, Cuskelly, & Carroll, 2013; Libbey, 2004; Maddox & Prinz, 2003; McNeely, Nonnemaker, & Blum, 2002; Sieving et al., 2017; Shochet, Smyth, & Homel, 2007; Traylor, Williams, Kenney, & Hopson, 2016; Wentzel, Battle, Russell, & Looney, 2010; Whitlock, 2004).

A substantive body of research exists on the behavioral, emotional, and social effects of connectedness in adolescents within school environments. However, much of that research is focused on individual student-level or teacher-level factors (Blum, 2005; Klem & Connell, 2004; Marzano, 2003; Marzano, Pickering, & Heflebower, 2010; Wentzel et al., 2010). Student-level factors are those conditions and behaviors that are

either done by or enacted upon an individual student. Similarly, teacher-level factors are behaviors manifest or interventions applied by teachers in the context of their classroom environment and with individual students (Marzano, 2003; Marzano et al., 2010).

Research on school-level factors is more limited. In a systematic study of connectedness literature, Chapman et al (2013) found that school-based programs intended to promote connectedness are complex and time consuming and the research to determine the effectiveness of these programs is equally difficult. This complexity contributes to the minimal research available on school-level interventions associated with connectedness (Centers for Disease Control and Prevention [CDC], 2009; Chapman et al., 2013).

Relevant to this study, Chapman et al. (2013) also found that research on multicomponent school programs intended to promote connectedness was even scarcer. This finding was supported in the research of Wright, John, Livingstone, and Duku (2007). This circumstance is relevant since AISU utilizes a multicomponent educational model. Crew and Intensives are part of that model. The AISU administration seeks to understand, within the scope of their multicomponent model, the degree to which students feel connected generally, to the school, Crew, and Intensives.

Therefore, this study will contribute to the literature in three ways. First, it will add to available research that AISU administrators can use to determine the degree to which they are meeting the goals of their Charter. Second, it will add to the body of work that examines school-level factors as associated with adolescent connectedness. Last, it will add to the scant literature on the effect of multicomponent school programs related to

perceptions of connectedness.

Theoretical Framework

Connectedness, as a protective factor, includes both social and individual elements. Within the context of AISU, understanding how connectedness is being fostered requires recognition of the interplay among the individual, the group, and the environment. Albert Bandura's (1986) Social Cognitive Theory and theories within that, provide the foundation for the theoretical framework of this study.

Social Cognitive Theory

The conceptualizations of environmental and academic features of AISU are grounded in the tenets of Social Cognitive Theory. Bandura (1986) theorized that learning occurs in a social context with active, changing, and reciprocal interaction of an individual, his or her environment, and behavior. Emphasized in this theory are internal or external social reinforcement of behaviors. While Social Cognitive Theory accounts for past experiences that factor into whether a behavior will occur, it also recognizes that present influences, expectations, and group norms also have substantive power to shape behavior (Bandura, 1986; Pajares, 1996; Schunk, 1999). Bandura viewed people as both the producers and products of their own environments and social systems. Additionally, Pajares (2002) described Bandura's Social Cognitive Theory as rooted in a view of human agency in which individuals are proactively engaged in their own development and can make things happen by their actions.

Self-Efficacy Theory

Nested within Social Cognitive Theory, Bandura's ideas on self-efficacy also emerge as foundational to the investigation of connectedness. Self-efficacy Theory suggests that unless people believe their actions can produce the outcomes they desire, they have little incentive to act or persevere in the face of difficulty (Bandura, 1993, 1997; Pajares & Urdan, 2002). Research also posits that regardless of previous achievement or ability, self-efficacious students work harder, persist longer, achieve more, and persevere when challenged with adversity (Bandura, 1993, 1997; Pajares & Urdan, 2002; Schunk & Pajares, 2009).

During middle and high school years, individual perceptions of self-efficacy are largely derived from feedback gleaned from social environments. Adolescents spend much of their time in school environments where they are constantly looking for and receiving feedback from adults and peers (Thomas, 2013). This suggests that school leaders and personnel have substantive effect on the development of self-efficacy beliefs in students. Implementation of school-level factors that promote self-efficacy could positively affect many more students than those focused on a single classroom or individual.

Additionally, during adolescent years, feedback from peers has substantive influence on one's feelings of self-efficacy and connectedness to others. Adolescents learn from the actions of others and frequently compare themselves to peers (Pajares, 1996; Pajares & Urdan, 2002). Such social comparisons influence the development of self-efficacy beliefs either positively or negatively. Some self-efficacy theorists posit that

social-comparative practices emphasizing normative assessments, involving ability grouping, and encouraging students to compare their achievement to others, functions to destroy the fragile self-beliefs of adolescents (Pajares, 1996; Pajares & Urdan, 2002). This is especially true of students whose strengths are outside of common academic subjects, or who lack access to major protective factors in areas of their lives outside of school (Pajares & Urdan, 2002; Schunk & Pajares, 2009).

AISU, as an institution, attempts to mediate fractures in student perceptions of self-efficacy through a variety of means including culture, educational model, levels of student autonomy, and student support structures. Encouraging students' connectedness to peers, adults, and the school itself is an intended outcome of AISU participation. The intent is that AISU will provide an environment where self-efficacy increases, no matter where a person is from, or what protective factors he or she possesses at enrollment.

Collective Efficacy

In addition to his theories on self-efficacy, Bandura's theories were inclusive of the idea that "because human lives are not lived in isolation, the conception of human agency includes collective agency" (Bandura 1997; Pajares, 2002). The idea of collective agency can be associated with the term collective efficacy. Collective efficacy has been conceptualized as "the performance capability of a social system as a whole" (Bandura 1997, p. 469). Collective efficacy is like self-efficacy in that it refers to the effectiveness with which group members work together toward group goals and persist in the face of difficulty (Putney & Broughton, 2011). In schools, collective efficacy is associated with task completion, level of effort, persistence, thoughts, stress levels, and achievement of

groups (Goddard, 2001).

AISU's curricular and social features are intended to promote both individual self-efficacy and collective efficacy among students. These elements help establish norms that foster a culture of active contribution, pro-social behavior, trust, belonging, and academic achievement. Crews and Intensives provide social structures whereby each student has a place where he or she has legitimate membership. Crew, specifically, ensures that each student is included within at least one small group within the larger student population. The intent is that positive social influences of the small group will have a greater likelihood of reinforcing positive academic and social behavior, thus promoting the further development of individual self-efficacy sufficient to generate feelings of connectedness and the development of other protective factors. Intensives also provide opportunities for development of collective efficacy where groups of students spend all day, every day for two weeks engaging in a significant focused effort. The social interactions and collective work toward a common goal experienced in Intensives are thought to promote collective efficacy.

Definition of Terms

For the purposes of this study, a protective factor is a condition, circumstance, or intervention that promotes engagement in positive, healthy behaviors and activities while dissuading participation in negative or harmful ones. Positive behaviors known as pro-social behaviors are defined as words and actions directed toward peers, adults, and self that are socially, emotionally, and physically healthy and safe for all involved (Noble &

McGrath, 2012).

The construct of connectedness refers to an individual's perceptions of belonging, being valued by caring adults and peers. Students who feel connected to their peers, teachers, and the school tend to feel socially, emotionally, and academically safe in the school environment. Connectedness also refers to one's awareness of his or her unique membership in and contribution to a peer group or organization (Deci, Ryan, Schultz, & Niemiec, 2015; Frydenberg, Care, Chan, & Freeman, 2009; P. Law et al., 2013; R. Lee & Robbins, 1998; Traylor et al., 2016).

The term AISU Crew or Crew refers to the social and academic support grouping of students at AISU. Crew is similar to structures such as Advisory periods or Homeroom groups with some key differences. These include more cross-age Crew groups that remain together throughout a student's enrollment at AISU, focused content study, group projects and group goals. The terms Advisory and Homeroom are used interchangeably throughout the paper. AISU Crew assignments are made across age groups at the middle and high school level.

This study investigates secondary students in the American education system. As such, middle school refers to secondary grades six, seven, and eight. High school represents grades 9, 10, 11, and 12. The term freshman refers to ninth graders. A sophomore is a tenth grader. Eleventh graders are known as juniors and 12th graders are seniors.

The American International School of Utah (AISU) is a public charter school. In the U.S., a public charter school is a school that is part of the free public-school system and is held to all the same regulatory requirements as other public schools. In Utah, as

public entities, charter schools receive public funding. The difference is that a charter school has a specific focus of its educational model and mission that differs from a public school. The charter has been formalized and approved by a state charter school authority and state school board.

A Crew leader is an adult who is assigned as the leader of a Crew. At AISU, this person is either a formally trained and licensed teacher, or a success coach.

Prosocial behavior is defined as words and actions directed toward peers, adults, and self that are socially, emotionally, and physically healthy and safe for all involved (Noble & McGrath, 2012).

Summary

This study focused on the extent to which secondary students at AISU report perceptions of connectedness overall, to friends, peers, to teachers, and to school. Specifically, this work examined the extent to which participation in Crew and Intensives influence perceptions of connectedness among secondary students. Data collected provided insights about perceptions of connectedness within the AISU environment that may be used to inform current practices, identify additional student support needs, and improve future implementations.

Chapter II examines relevant literature that supports this study. It reviews connectedness as a construct, as a protective factor in adolescent development, and connectedness to the school environment. Chapter III outlines the procedures and methodology that were used during this research. Chapter IV presents the results of the

data analyses. Chapter V reviews the findings of the study and discusses the impact of these findings.

CHAPTER II

LITERATURE REVIEW

The literature review for this study served three main purposes. The first is to review literature relevant to connectedness as a construct. The second is to study connectedness as it pertains to adolescent development. The third is to examine connectedness research associated with the school environment, as Crew and Intensives all take place within the school environment.

Eric Resource Information Center (ERIC) via Elton B. Stephens CO (EBSCO), PsychINFO, Education Full Text via EBSCO, Academic Search Premier, and Google Scholar were used to locate empirical studies and peer reviewed research articles on the topics included in this literature review. Searches were initially constrained to peer-reviewed, full-text pieces within the years of 2000 to 2018. As investigation commenced, additional relevant resources published prior to 2000 were discovered and included in the review. Individual and combined search terms were used to identify relevant works.

Terms included connectedness, belonging, school-level factors, teachers, peers, support, adolescent, development, social-emotional, protective factors, Advisory, Homeroom, middle school, high school, belonging, prosocial behavior, antisocial behavior, bullying, isolation, violence, prevention, academic engagement, social engagement, persistence, caring adult, measures, qualitative research methods, and case study. Examples of combinations include connectedness + adolescent, connectedness + adolescent + bullying, school + connectedness + middle school, connectedness + protective factors + pro-social behavior + school, connectedness + peers + support +

school.

The review of literature yielded other resources that were relevant to this study. Additional concepts and citations within those resources served to guide and enhance exploration of applicable concepts. Some of the resources initially identified in the literature search were determined to be tangential or irrelevant to this study. The whole set of literature was narrowed to those resources most pertinent to this study. After data are gathered, another search for related literature was performed to ensure comprehensive coverage of the topics explored. The same key words and combinations of key words will guide the subsequent search.

Connectedness

Historically, connectedness, as a construct, originated in the fields of medicine, psychology, and sociology. The study of connectedness in educational settings emerged as a focus of many studies in the 1990s and early 2000s. The increased use of social media platforms has spurred additional research into the need for interpersonal connectedness within a technologically connected world (McLoughlin, Spears, & Taddeo, 2018; C. Zhang, Du, Sun, & Ding, 2018). The terminology used to describe connectedness, as a construct, varies widely across disciplines and includes; for example, the terms bonding and attachment are often used to represent connectedness (Libbey, 2004).

Human beings have a considerable need for connectedness (Lee & Robbins, 1998; Townsend, 2005). Fundamental to human motivation are regular and positive interactions within an ongoing relational connection (Baumeister & Leary, 1995; Townsend, 2005).

Numerous studies demonstrate that physical health, mental health, adjustment, and well-being are negatively impacted when individual needs for connection and meaningful lasting relationships are not met (McLoughlin et al., 2018; Moen, 1998; Rude & Burham, 1995; Townsend 2005). Even in modern, technology facilitated interpersonal interactions, where individuals are geographically separated from one another, the importance of connectedness is essential.

In their study on social media use and social connectedness in adolescents, K. Allen, Ryan, Gray, McInerney, and Waters (2014) found that social media plays a role in fostering social connectedness despite the inherent physical separation between individuals. Their findings suggest that young people may experience both positive and negative psychological outcomes from social media use. To mediate negative outcomes, McLoughlin et al. (2018) found that young people who were more socially connected in both the physical and virtual world were more likely to cope actively in response to cyber victimization.

Connection to others via social media methods is also becoming a primary forum for interaction and is increasingly replacing face-to-face interaction (Hoffman, Anderson-Butcher, Fuller, & Bates, 2017). Thus, both positive and negative implications of social media use are becoming more prevalent as more and more people engage with others primarily through virtual means (McLoughlin et al., 2018). Unfortunately, cyber bullying and other forms of harmful victimization are also occurring more frequently as perpetrators feel more empowered to harm others from behind the anonymity of their computer. Cyber bullying is on a trajectory to outpace face-to-face bullying as

interactions become more frequently held via internet connectivity than in physical settings (McLoughlin et al., 2018; Allen, Ryan, Gray, McInerney, & Waters, 2014).

Fortunately, connectedness to others, whether in physical or technological environments, can help protect individuals from the negative effects of bullying in all its forms (McLoughlin et al., 2018). For example, in their work on computer-supported education, Hsu and Ching (2013) include connectedness, sense of belonging, and trusting relationships in the construct of building a community. Within that online classroom community, connectedness within a classroom community was found to be essential to success (C. Zhang et al., 2018).

Regardless of physical or cyber settings, consequences of limited connectedness to others results in social isolation, purpose in life, pervasive feelings of being cut off from the world, increased contentious relationships with peers or family members, and even a sense of disconnectedness from self (Baumeister & Leary, 1995; Hoffman et al., 2017; Lee & Robbins, 2008; McLoughlin et al., 2018; C. Zhang et al., 2018).

Further, as a construct, connectedness includes various iterations of a person being actively involved with another person, group, or environment where that involvement promotes a sense of social and emotional safety, well-being, and comfort (Cooper, Grotevant, & Condon, 1983; Deci et al., 2015; Frydenberg et al., 2009; Hagerty et al., 1993; Lee & Robbins, 1998). Other research by Eraslan-Capan (2016) looked at a form of social and emotional well-being defined by positive psychologists as “flourishing.” Eraslan-Capan investigated the mediating effect of hopelessness on social connectedness and flourishing. Results revealed that individuals with low levels of social

connectedness are likely to experience hopelessness, which results in lower levels of flourishing.

In their work on connectedness, Karcher, Holcomb, and Zambrano (2006), assert that the concept of connectedness is the reciprocation of belonging, relatedness, and attachment. Another conceptualization of connectedness put forth by Karcher et al. is that connectedness is a behavioral and attitudinal response to feelings of belonging or the lack thereof. Conceptualized differently, Lee and Robins (1998), suggest that, based on self-psychology theory, belongingness is comprised of social connectedness and social assurance.

Another view on how connectedness is attained, Baumeister and Leary (1995) suggest that socially supportive interactions with family, friends, and other significant people in one's circle result in positive feelings of relatedness and belonging. They suggest that youth reciprocate these feelings by "connecting" with others by assigning them positive affect and seeking continued interaction with them (Baumeister & Leary, 1995; Law et al., 2013). Supporting the views of Baumeister and Leary (1995) and Law et al (2013) is the work of Ryan and Deci (2002) and Traylor et al (2016) asserting that connectedness arises from the belief held by individuals that the adults and peers in their lives value them and genuinely care about their safety and success.

Despite the nuances in the various conceptualizations of connectedness, several crucial components consistently occur within relationships. The first is an increased sense of well-being that comes from feeling connected to others. The second is motivation and ability to act positively both within and beyond the boundaries of a relationship. Third, is

a developed self-knowledge and awareness of the other or others within a relationship. Next, there is an increased sense of self-worth. Lastly, there is a desire for additional connections (Chapman et al., 2013; Lee & Robbins, 1998; Ryan & Deci, 2002, Traylor et al., 2016).

Related to educational contexts, Jorgenson, Farrell, Fudge, and Pritchard (2018) completed a study on the differences between how university students defined the construct of connectedness compared to how it was defined by researchers and theorists. Results suggested that students prioritized five functional dimensions of connectedness: (a) student connectedness (b) faculty connectedness (c) connectedness with old friends (d) connectedness with new friends, and (e) connectedness to diverse friends. This research supports the work of Townsend (2005) who asserted that an awareness of self and view of self in relation to others are often found as central to many conceptualizations of connectedness.

The literature repeatedly references social networks of family, friends, peers, other social groups, and connectedness as major contributors to perceptions of meaning in life (Chhuon, & Wallace, 2014; Bengston & Grotevant, 1999; Bellingham, Cohen, Jones, & Spaniol, 1989; Deci et al., 2015; Frydenberg et al., 2009; Jorgenson et al., 2018; Lee & Robbins, 1998; Townsend, 2005). To achieve greater meaning in life, research in the field of psychology has emphasized the value of one's capacity for relatedness as central to health, overall wellness and functioning in life (Hogg & Frank, 1992; Jordan, 1997; Jorgenson et al., 2018; Josselson, 1992; Karcher, 2001, 2002; Law et al., 2013, Townsend, 2005).

More recently, connectedness, as a construct, has received widespread attention in disciplines beyond psychology, medicine, and sociology. The capacity for connectedness in educational, employment, and civic contexts is becoming more frequently considered an essential component of individual and group functionality. The rise of a technology facilitated world that connects individuals, schools, communities, churches, businesses, and governments. The same technology that allows meaningful connection with individuals who are geographically separated can also be the platform by which people can experience tremendous isolation. The need for connectedness and associated research is increasingly needed.

Connectedness and Adolescent Development

Connection and engagement are key developmental assets for adolescents (Chase, Warren, & Lerner, 2015; Griffiths, Sharkey, & Furlong, 2009). The widespread use of technologically facilitated interaction with others has added a new dimension to the construct of interpersonal connectedness, especially among young people. The implications of a technologically connected world as it intersects with traditional academic and social settings is important to understand. Depression, anxiety, suicide, and other risk-taking behavior seem to be increasing as social media and technologically facilitated interaction expands.

Savci and Aysan (2017) studied technological addictions and social connectedness among young people. Using a social connectedness scale and a social media disorder scale they studied 201 adolescents who had been using the internet,

playing digital games, and using social media with their own account for at least one year. Results showed that internet addiction, digital game addiction, and smart phone addiction predicted 25% of the social connectedness score. Savci and Aysan go on to suggest that

Internet addiction, social media addiction, digital game addiction, and smart phone addiction on social connectedness can be explained by real social environments, loneliness, peer groups and friendship, communication skills and socialization tendencies, intimate relationship and personality traits (p. 210)

Their findings demonstrate the link between the connectedness in cyber-space and in physical settings. This is important as Lee and Robbins (2008) emphasize that social connectedness develops through interpersonal relationships established in the real social world. The work of Savci and Aysan (2017) suggests that individuals who spend a considerable time in virtual environments are at risk of diminished development of social connectedness or loss of previously developed social connectedness.

In school settings, higher levels of academic achievement, overall psychological well-being, and social functioning have been observed in adolescents who feel connected to peers, parents, teachers, and their schools (Odden-Heide, 2015; Roffey, 2008; Roth-Herbst, Brobely, & Brooks-Gunn, 2008; Theokas et al., 2005;). In addition to connectedness, adolescents have an innate need to make choices and exert some level of control over their learning, have opportunities to develop strong and supportive relationships with teachers and peers, and be given chances to demonstrate competence (Deci et al., 2015; Ryan & Deci, 2002). Having these needs met is essential to healthy adolescent development with respect to school functioning.

Also important to adolescent social-emotional development is access to

supportive relationships inside and outside of school. Meaningful opportunities for developing supportive relationships include involvement with and membership in various groups, working with others to complete challenging tasks, and completing meaningful learning tasks under the guidance of teachers (Connell, Dishion, & Deater-Deckard, 2006; Gambone & Connell, 2004; Gambone, Yu, Lewis-Chapman, Sipe, & Loeber, 2006). Additionally, Fifolt et al (2018) assert that connectedness to adults and peers, through supportive relationships, is crucial especially during adolescent years, when youth are increasingly exposed to health-compromising behaviors.

Further, for young people, social-emotional development sufficient to achieve healthy levels of connectedness is likely influenced by the degree to which basic needs are met. Much research exists to support views that until basic needs for food, shelter, and physical safety are met, the more complex psychological and educational needs cannot be met (Gawel, 1997; Lester, 2013; Maslow, 1943; Noltemeyer, Bush, Patton, & Bergen, 2012). Karcher (2001) supports this idea by suggesting that connectedness levels can predict physical health and psychological development. When basic needs are not met, the development of connectedness is diminished. After ensuring basic needs are met, efforts to increase the connectedness of young people are warranted since levels of connectedness have been shown to be associated with adolescent risk-taking behaviors, violence, depression, and suicide (Bogenschneider, Wu, Raffaelli, & Tsay, 1998; Chapman et al., 2013; Dryfoos, 1991; Hawkins & Weiss, 1985; Karcher, 2001, 2002).

Enhancing the need for fulfillment of basic needs, social capital theorists assert that adolescent development includes components of connectedness such as trust, norms,

and meaningful exchange between adolescents, peers, and adults (Putnam, 1995; Savci & Aysan, 2017). Additionally, adolescent well-being is thought to include dimensions of behavior, emotional health, physical health, academic achievement, and social adjustment (Bassani, 2007; Chapman et al., 2013; Fifolt et al., 2018).

Another component of adolescent development includes multifaceted social capital related to connectedness. Included is the idea that social capital has two fundamentally interconnected components. One is structural and the other functional. Individuals who are members of a group represent the structural component. The way in which members of the group interact is the functional component (Bassani, 2007). Social capital theorists and others assert that promoting connectedness in the school setting can serve to counterbalance the increasing importance of connectedness to peers, friends, and romantic partners during adolescence. This occurs when opportunities are provided for typically disconnected youth to form connections with others in this conventional environment (Karcher et al., 2006; Law et al., 2013).

Similar to the work of Karcher et al (2006), Nakkula and Selman (1991) present a construct referred to as the Ecology of Adolescent Connectedness wherein the world of the adolescent's social ecology can be viewed as a world of connectedness. Used in this way, the term "world" refers to common and important contexts, relationships, and activities of engagement in the lives of adolescents. The "world" includes school, friends, family and neighborhood. The ecology of adolescent connectedness includes all the significant ecological systems that adolescents experience in their daily lives. Microsystems, macrosystems, and the mesosystems that link the two are at play in the

lives of adolescents. Microsystems include important relationships at home with parents and siblings, in school with teachers and peers, and in their neighborhood with friends. Macrosystems of connectedness are the larger institutions in adolescents' lives in which these microsystemic relationships and activities occur and include one's family, neighborhood, school, religion, and cultural group. Finally, mesosystems are those processes of connection that link microsystems and macrosystems (Karcher et al., 2006; Karcher & Sass, 2010; Law et al., 2013; Whitlock & Powers, 2008).

In addition to views on social capital, much of the literature on adolescent development demonstrates that physical and psychological needs vary by age. For example, capacities, perceptions, and needs of eighth graders, are quite different from those of twelfth graders. Nakkula and Selman (1991) argue that interpretations of connectedness develop over time. Similarly, the literature on adolescent connectedness focuses on specific contexts of adolescent social ecology referred to as "worlds of connectedness" that change over time (Cooper et al., 1983; Karcher, 2001; Nakkula & Selma, 1991).

Moreover, in his validation study of the Hemingway Measure of Social Connectedness, Karcher (2001) found that younger students reported more conventional types of connectedness, while older students reported more unconventional connectedness (see Appendix A). Conventional and unconventional connectedness can be considered to fall somewhere on a continuum. Conventional connectedness was initially conceptualized by Jessor and Jessor (1977) and can be defined as following the way things are usually done within the context of the setting and socially acceptable

behaviors. It is often associated with things and ideas that are adult sanctioned.

Unconventional connectedness is characterized by affiliations and behaviors that are not generally considered to be socially acceptable and often not sanctioned by adults. Often viewed as not socially acceptable nor youth sanctioned, unconventional connectedness often elicits activities that can lead to problem or antisocial behaviors (Karcher, 2001, 2002).

From an adolescent developmental perspective, connectedness is an essential protective factor to foster positive relationships and pro-social behaviors, while shielding youth from harmful relationships and behaviors. Since adolescents spend the majority of their time in school environments, the school is an important place in which to foster the development and maintenance of connectedness.

Connectedness in the School Environment

Within school environments, connectedness, as a construct, has been formally studied in association with the terms connectedness (Deci & Ryan, 2000; Frydenberg et al., 2009; Juvonen, 2007; Van Ryzin, 2011), school belonging (Osterman, 2000), student engagement (Juvonen, 2007), and teacher support (Klem & Connell, 2004; Reddy, Rhodes & Mulhall, 2003). Libbey (2004) reviewed studies on connectedness that specifically measured students' relationships to their schools. She found definitions of the construct are varied based on indicators used, the degree to which students felt they were liked by others at school, student commitment, school involvement, and belief in school rules. Frydenberg et al. (2009) denoted connectedness as students' perceptions of being

accepted by the school and identifying themselves as being part of the school.

Additionally, students show that supportive relationships and a sense of connectedness are critical protective factors for vulnerable populations in schools (Battistich & Hom, 1997; Becker & Luthar, 2002; Frydenberg et al., 2009).

Deci and Ryan (2000) suggest that students' perceptions of the school environment typically fall along three dimensions. The first is perceptions of autonomy. This is influenced by the amount of choice and opportunity for self-regulation while learning. Second, autonomy is influenced by perceptions of belonging. Sense of belonging is influenced by the amount of support available from teachers and peers. Lastly, perceptions of competence are foundational to one's sense of autonomy. This is influenced by the school's efforts to recognize effort, treat all students fairly, and evaluate each student individually rather than in comparison to others. These elements function together to create a sense of connectedness that becomes a powerful protective factor for all populations of students. Conversely, it has been found that young people who perceive that their educational environment is not supportive of their psychological and developmental needs are at greater risk for motivational, behavioral, and psychological problems (Eccles, 2003; Eccles & Roeser, 2011).

Wilson, Asbridge, and Langille (2018) found, in their study on depression in sexual minority adolescents, that for all categories of sexual orientation, except homosexual females, school connectedness was a protective factor for them. Additionally, they determined that school connectedness scores were higher for heterosexual students than for all other subgroups. Except for bisexual boys, this study

found that being any other subgroup was associated with symptoms of depression (Wilson et al., 2018).

Finally, connectedness or the lack thereof, has been shown to effect levels of academic performance (McNeely et al., 2002). Research documenting the relationship between social alienation and dropping out of school offers evidence demonstrating how limited connectedness contributes to disengagement over time. Furthermore, studies have confirmed that student perceptions of the academic, social, and emotional safety of school environments are directly linked to learning engagement that results in changes to academic achievement (Eccles, 2003; Eccles & Roeser, 2011; Van Ryzin, 2011).

Supportive of this idea is the work of Fifolt et al (2018) who state,

The Centers for Disease Control and Prevention (CDC) defined school connectedness as “the belief by students that adults and peers in the school care about their learning as well as about them as individuals. According to Monahan, Oesterle, and Hawkins (2010), the two primary and interdependent components of school connectedness include “(a) attachment, characterized by close affective relationships with those at school; and (b) commitment, characterized by an investment in school and doing well in school. (p. 190)

Fifolt et al (2018) also include research from Blum (2005) who argued that “school connectedness may have a substantial impact on measures of student retention and achievement” (p. 190). They further assert that Blum identified

...a number of factors that were positively associated with school engagement including opportunities for students to participate in (a) experiential, hands-on learning; (b) service learning and community service projects; and (c) mentoring relationships, as well as experiences that promote positive and purposeful peer support and peer norms. (p. 190)

Moreover, several authors have provided evidence that school connectedness is related to behavioral, emotional, and academic outcomes. These authors further stated

that in addition to the school environment, parents and peers play important roles in encouraging strong school connections among adolescents (Eccles, 2003; Fifolt et al., 2018; Osterman, 2000; Resnick, 1997). The relatedness of levels of school connectedness with academic achievement and pro-social behavior are evidenced across the literature and support the importance of this study.

Additionally, review of available literature about school connectedness resulted in few studies on school-level interventions. For example, one study by Chapman et al. (2013), conducted an analysis on the literature available on school-based programs for increasing connected and reducing risk behaviors. Their initial literature search used the key search terms of “school connectedness,” “school attachment,” “school bonding,” “school affiliation,” “school membership,” or “school community.” These terms were each paired with the term “intervention,” “program,” or “prevention” and with “violence,” “delinquency,” “alcohol,” “risk taking,” or “injury.” Search results included 321 peer-reviewed articles, book chapters, and books. Chapman et al. reduced this list to 26 after a review of the abstracts for relevance to the research question asked therein. Upon further review, only 14 articles describing school-based programs met all relevant criteria for inclusion in the Chapman study.

In addition to other literature searches for this study, a search of the education and psychology databases available through the USU library on the terms “school-wide,” “intervention,” and connectedness” between the dates 2008 and 2018 yielded only eight results. After examining the abstracts of each and excluding the ones that were not aligned with the research questions of this study, only six remained.

One result was a study where Ciffone (2017) examined a school social work service delivery method to enhance student connectedness to social workers. In another, King, Gipson, and Opperman (2015) studied the “Let’s CONNECT” intervention targeting social connectedness, bullying, and youth suicide risk. It is a community-based mentorship intervention for youth at elevated risk of suicidal behavior.

Gorman-Smith (2012) studied a developmental-ecological model to mitigate violence prevention perpetrated by and victimization of students with disabilities. The focus was on students with behavioral disorders. The author asserts the importance of implementing school-wide activities and policies to foster social connectedness and positive learning environments.

Hoffman, Anderson-Butcher, Fuller, and Bates (2017) studied the school experiences of rural youth in the Appalachian Ohio region. Data were gathered from 3,296 middle school youth in the area as part of a community-wide needs assessments. Results showed well-developed peer relationships and high perceptions of parental involvement. However, the authors identified limited school connectedness.

A study by Beets et al (2008) was one of two search results that included references to “school-level” factors and “perceptions of connectedness” as specific terms in the same study. This research focused on the relationships between school climate and teachers associated with the implementation of a positive action program for school-based prevention, social character, and development. School connectedness was explored, but peer or teacher connectedness were not studied as independent constructs.

Only one case study, by Odden-Heide (2015), looked at an advisory period as a

school-level intervention to foster increased student connectedness to school. It defined connectedness as the “extent to which students feel personal accepted, respected, included and supported by others in the school environment.” Even though it did not expressly examine connectedness to peers or teachers, the definition of school connectedness, derived from the work of Goodenow (1993), was used by Odden-Heide. This definition could be viewed as inclusive of connectedness to peers and teachers.

Moreover, in the Odden-Heide (2015) study, an intervention, similar to AISU Crew, called Innovation Hour was examined. Innovation hour was created in response to the tragic deaths of five teens in midwestern community during a single school year. This unique advisory program was a student-developed, student-led advisory period with the goal of ensuring that every student was connected to a group of peers and an adult throughout his time at the school. In the second year of the Innovation Hour implementation, some of the development and leadership responsibility was shifted to the teachers. This transition did bring the format of Innovation Hour into closer alignment with the structure of AISU Crew and thereby made the Odden-Heide (2015) study more comparable to this study.

Of all of the work examined during the literature review phase of this AISU research project, Odden-Heide’s (2015) most closely aligned with the focus of the study on perceptions of connectedness at AISU and elements of the study design. Specifically, Odden-Heide explored connectedness associated with a unique advisory period school-level intervention similar to Crew. It also included some elements found in AISU intensives. Though AISU Crew is not expressly like the Innovation Hour format of

student-developed and student-led, Crew does include substantive amounts of student input and informal leadership is inherent in the design and implementation. In addition, AISU Intensives typically involve the opportunity to learn a specialized skill. Even though the Innovation Hour service projects are not exactly like AISU Intensives, some Intensives do include planned service projects. This is another way the Odden-Heide (2015) study is relevant as a guide for the approach to the AISU study.

With respect to study design, in the early stages of planning for the AISU study, like Odden-Heide's (2015) research, the qualitative case-study design, as articulated by Creswell (2015), was considered. A qualitative case-study approach is one where the investigator explores a bounded system or multiple bounded systems over time, through detailed, in-depth data collecting involving multiple sources of information and reports a case descriptions and case-based themes.

Similar to using the Hemingway Measure of Adolescent Connectedness by Karcher (2011) as the framework for operationally defining and measuring connectedness for the AISU study, Odden-Heide (2015) used a Developmental Asset framework by Starkman, Scales, and Roberts (2006). Using this framework, Odden-Heide (2015) developed the questions used in each of four focus groups conducted in the study. Also similar to the AISU study design, Odden-Heide (2015) used the semistructured interview format for the focus groups held with students, teachers, and school counselors (see Appendix B).

Finally, Odden-Heide (2015) completed a thematic data analysis. Four themes were identified. The first was "buy-in" to the legitimacy of Innovation Hour was a

significant challenge for students and staff. The second theme was the logistical challenges of Innovation Hour implementation. The third theme was a clarity among respondents that Innovation Hour was defined by its student-led delivery and service focus. The fourth theme was that student and staff leaders saw signs of progress with connecting and engaging students to school because of Innovation Hour.

Odden-Heide stated,

Innovation Hour is a unique advisory program that was created at Anywhere High School to foster increased student connectedness to school. The purpose of this qualitative case study was to explore students' and staff members' experiences with the creation and implementation of Innovation Hour as well as to gauge their perceptions of whether Innovation Hour influenced an increased student connectedness to school. What emerged was a story of resiliency and willingness to innovate among our students and staff. Despite its challenges, students and staff believed in the importance of Innovation Hour; students believed in their abilities to lead a school-wide initiative; and everyone was eager to engage in something meaningful. (p. 68)

Two findings from Odden-Heide's (2015) qualitative case-study approach informed the design of the AISU study. Two themes that emerged included the frequency wherein respondents reported challenge associated with "buy-in" and logistical implementation of Innovation Hour. Those themes appeared to eclipse the focus on the study of the degree to which Innovation Hour was associated with connectedness to school.

When planning the final design for this AISU study, these factors were considered and, as a result, the investigative approach was modified to be Creswell's (2015) explanatory-sequential design. This method was chosen in an attempt to reduce the likelihood that perceptions of logistical, implementation, or other challenges would overwhelm the intended study focus of perceptions of connectedness.

Similar to the circumstances that prompted the Odden-Heide (2015) study, the administration of AISU sought to understand the degree to which their students feel connected to their school and the degree to which the school-level interventions of Crew and Intensives promoted connectedness. Limited existing research on school-level interventions makes it difficult for school leaders to identify and implement programs that will increase connectedness within their schools. The findings of this study will add to the existing research about the degree to which school-level interventions or programs influence perceptions of connectedness among adolescents.

Connectedness Research Designs

Beyond the research designs described previously, connectedness research, overall, has emerged across several disciplines such as medicine, psychology, sociology, and education. Much of the research that has been done previously uses self-report data through the use of surveys and interviews (Cordier et al., 2017; Lee, Draper, & Lee, 2001; Lee & Robbins, 1998). For example, Cordier et al (2017), studied the methods used to measure social inclusion within which connectedness is the most frequently occurring metric. Using the CINAHL, ERIC, Embase, PsychINFO, PubMed, and other databases, Cordier et al. found 7,099 records measuring social inclusion. After excluding items that did not meet their research criteria, they reduced their study to 237 full-text articles, manuals, and assessment instruments. From that group, they identified 25 instruments for assessing social inclusion. Of those instruments, all of them were either a self-report questionnaire or an interview (Cordier et al., 2017).

A likely reason for this is that operational definition of connectedness is nuanced and varies across disciplines (Chapman et al., 2013). Moreover, connectedness is a complex intrinsic perception associated with emotions and experiences. It is a non-cognitive measure that is difficult to measure directly. Therefore, researchers must observe behavioral manifestations of connectedness or rely on self-reporting through survey data, interviews, and other qualitative study.

Self-report data is subject to several measurement biases. For example, social desirability bias is present when a respondent provides an answer based the perception of what is “ideally good” and what is “ideally bad” (Miller, 2012). For instance, Miller states that

An answer of “yes” to the statement “I am always a good listener, no matter who I am talking to.” would be considered a socially desirable response. Even if a person were more attentive than most, it is likely that there have been times where he or she has been distracted, irritable, or tired and therefore not a good listener. Conversely, a “no” response to the statement “I sometimes feel resentful when I don’t get my own way.” would also be a socially desirable response. (p. 31)

In the early research on social desirability bias, very sensitive topics such as sexual or drug-related behaviors were addressed (Carpenter, 2009). Relevant to this study however, later research in an educational setting suggests that social desirability bias may have an impact on student responses for less sensitive topics as well. Several studies have also found significant relationships between perceptions of institutional values, goal orientation, and satisfaction with chosen major (Bowman & Hill, 2011; Ferrari, McCarthy, & Milner, 2009; Miller, 2012; Nauta, 2007). Social desirability bias among students in secondary school settings is likely when participants are asked to respond to statements associated with institutional values, what other students think, what teachers

think, what parents expect of them, or how their peers may judge their responses.

Susceptibility to social desirability bias was taken into consideration as the design for the AISU study was chosen.

Also considered when determining a design for this study, other potential biases commonly found in self-report research were considered. For example, surveys of normative behavior often include substantial measurement error as respondents tend to report higher rates of engaging in a behavior than is warranted (Brenner & DeLamater, 2016). Normative behavior includes things like exercising, voting, homework completion, and participation in extracurricular activities. Over-reporting of normative behavior in survey research can be known as conformity bias. This type of bias is likely to be present in the responses of middle and high school students because adolescents are often consumed with the idea of fitting in or conforming to perceived norms. The potential of this bias was also considered when selecting the design of this investigation.

Other common biases in self-report research are known as (a) acquiescing (b) order effects (c) prestige (d) threat and hostility (e) sponsorship (f) stereotype, and (g) carry over effects. Acquiescing is the tendency for respondents to answer everything positively regardless of how they actually feel (Kuru & Pasek, 2016). Whereas, order effects biases occur when respondents are influenced by the presented order of the items from which they are to choose. Prestige bias occurs when respondents tend to represent their situation as better than it is in order to put themselves in the most positive light. For example, an individual might round up his or her income when asked to disclose it.

A different kind of bias, originating from the self-report instrument itself is threat

and hostility bias. This occurs when self-report instruments are written in such a way as to elicit negative emotions. An example might be a survey required by an insurance company after a car accident or a behavior survey after a student has been suspended from school. Another type of bias in self-report data is sponsorship bias which happens when participant answers are influenced by where the survey comes from. For example, a Utah Jazz fan who receives a survey from a Jazz sponsoring organization would tend to answer more positively than if it came from a more benign group.

The potential for sponsorship bias to occur in the context of this study was related to the fact that the measures were distributed by the AISU administration through the traditional school communication channels. Participant positive or negative perceptions about the sponsor of this study could influence responses. Additionally, the Utah State University sponsorship was disclosed. Researchers recognized that this could influence the way respondents answered questions. This was considered in the selection of the research method of this study.

Additionally, stereotype biases which result from societal or cultural stereotypes are also found frequently in survey research. For example, questions asking about gender, race, age, technical ability, education, or socioeconomic topics may influence a respondent to answer in a way consistent with the stereotype. Further, a question about math ability might be influenced by a respondent's view that males are naturally better at math than females. In the context of this study, there was likelihood that stereotype biases might affect student self-report since adolescents are exploring which stereotypes fit them, which ones they agree with, and how they fit the common stereotypes for kids their

age. Extremes of either fitting well into or well out of stereotypes is of utmost importance to an adolescent.

Another bias that was considered was, carry-over effect, also known as mindset bias, which occurs when the nature of one question impacts the respondent's perception of other questions. Since semistructured interviews tend to include related question sets, the potential for this bias was also a possibility and had to be considered. Moreover, a respondent's positive or negative perception of AISU, Crew, and Intensives may also influence the mindset from which a participant responded to items.

Recognizing the potential biases and acknowledging the need to mitigate them, the researcher identified some effective methods for mitigating the social desirability and other biases within the context of this study. Examination of variety of other studies on connectedness in education settings showed that pairing self-report instruments with other types of measures that are less susceptible to bias is one way to mitigate bias (Miller, 2012). Another way to do it is through the use of multiple measures of the same construct (American Educational Research Association [AERA], 2014; Miller, 2012.) Other options for handling bias include balanced scales, item-specific questions, statistical correctives, and instructional manipulation. These have been found effective with acquiescence and other forms of bias (Gordon, 1987; Kuru & Pasek, 2016). These methods were all considered in the choice of design for this study.

When researching nuanced constructs like connectedness it is more difficult to find ways to observe behavioral manifestations of connectedness than it is to obtain self-report survey and interview data. However, one study by Anderson-Butcher (2010)

accomplished this. Anderson-Butcher studied school connectedness using both a direct observation of a behavioral manifestation of connectedness and self-reporting survey data.

In this study on the premise of afterschool programs promoting school connectedness, Anderson-Butcher (2010) used attendance records, homework completion rates, and grades as direct measures of behavioral manifestations of connectedness. While it could be argued that grades and homework completion rates are not necessarily manifestations of feeling connected in school environments there is literature support to suggest that connected students don't want to disappoint teachers or peers, so they strive to complete homework and get good grades (Eccles, 2003; Fifolt et al., 2018; Karcher, 2011; Osterman, 2000; Resnick, 1997).

As part of the study, Anderson-Butcher (2010) also used survey data to ascertain stakeholder perceptions of outcomes resulting from participation in the afterschool program as well as their satisfaction with key program characteristics. Stakeholders included teachers, parents, and students. Triangulation of these data allowed for identification of themes related to key program design features that supported school-related outcomes, including connectedness. An interesting data point, used in this study, was the absenteeism variable, which is often a common measure of connectedness (Anderson-Butcher, 2010).

Given that studying the construct of connectedness would require the use of self-report data and, if possible, the use of direct observation of connected behaviors, the researcher evaluated several possible study designs. Consideration was given to the case-

study approach used by Odden-Heide (2015) and the need to mitigate the various biases. Logistical requirements and challenges for conducting the study at AISU were also identified and discussed with AISU Administration. As part of the considerations, the accessibility of academic achievement data, while available, was determined not to be the focus of this study. Furthermore, academic achievement data was not necessarily an indicator of connectedness associated with Crew, which is not academic in nature. Academic data from Intensives was also difficult to include because of the variability in how grades are calculated for Intensives. While, attendance data could have been helpful, AISU administration said that there was enough inconsistency in the attendance data kept for participation in Crew and during the Intensives that it would not be advisable to use it for this study.

After careful consideration and direction from the AISU Administration, it became clear that in order to provide efficiency, confidentiality, and prevent sponsorship bias from impacting the results, self-report data was the most accessible type of data that could be collected. No direct observation of connected behavior would be possible for this study.

To mitigate the potential biases in self-report data, a commonly used practice is to pair one measure of a construct with another one (AERA, 2014; Miller, 2012.). In order to design a sound study, a number of self-report instruments and possible pairings were considered. In reviewing a number of possible designs and similar research, it was determined that the Explanatory Sequential design, developed by Creswell (2015), was well suited for this study. This pairing of a quantitative measure with a qualitative has

been found to be quite useful for studying intrinsic, nuanced constructs like connectedness (Creswell, 2015; Snelson, 2016) so it was selected as the study design.

The first part of an Explanatory Sequential design utilizes a quantitative measure that can be analyzed effectively using common statistical procedures. This can be accomplished with complex constructs like connectedness, through the use of Likert-type scales (Likert, 1932) that can be quantified. The second part of the sequence utilizes a qualitative measure. Interviews are qualitative self-report instruments

To establish the first sequence of the Explanatory Sequential design, it was necessary to find a Likert-type survey self-report measure. Since adolescent connectedness was the construct to be measured, using a validated self-report measure of adolescent connectedness was optimal. The Hemingway Measure of Adolescent Connectedness (Hemingway) is such an instrument (Karcher, 2011). The Hemingway uses a Likert-type scale where respondents indicate their level of agreement with statements measuring connectedness. It is one of the few instruments that has been validated for use with adolescents.

A qualitative second measure of connectedness was needed to pair with the Hemingway in order to adhere with fidelity to the Explanatory Sequential design. To select a qualitative instrument, consideration was given to the desires of the AISU Administration and the goals of the study. In addition to connectedness generally, the AISU Administration was interested in learning the extent to which connectedness was associated with features of Crew and Intensives, as they were uniquely configured at AISU.

A search of academic databases looking for previously used self-report instruments to assess connectedness in settings similar to Crew and Intensives resulted in nothing suitable to accomplish the needed measurement. The closest study found was the work by Odden-Heide (2015) but that was studying a specific intervention. Further, there were various references to interview protocols on “advisory” and “home room” but nothing that could be adapted to specifically learn about Crew and Intensives as implemented at AISU. Therefore, consistent with common practices in self-report and social science research (AERA, 2014; Cordier et al., 2017; Miller, 2012) it was determined that a form of interview would be appropriate. A semistructured interview was deemed best to provide open ended response opportunities while keeping the focus on the research questions specific to the elements of AISU Crew and Intensives. It would serve both as a control for biases and provide the additional information about Crew and Intensives the AISU Administration was seeking.

Summary

Adolescence is a particularly vulnerable period of one’s life. In the U.S., most young people spend a majority of their waking hours in a public or private school setting. Therefore, it is helpful for educators, parents, and students to understand conditions associated with school settings impact the well-being of students. Evidence from the literature demonstrates that feeling connected to other people and places promotes healthy academic and social behaviors. The surge of social media and technology facilitated interactions has given rise to a variety of other positive and negative issues the

can impact an adolescent's well-being. Interpersonal connectedness in a technologically connected world adds new layers to the multifaceted construct of connectedness.

The literature reviewed for this study demonstrates that connectedness is a particularly important protective factor for young people. Adolescents who feel connected to their peers, caring adults, and communities engage more frequently in positive behaviors and tend to avoid harmful behaviors. As schools are micro-communities that include the complexities of the larger societies in which we live, it is useful to explore how perceptions of connectedness impact students in these environments.

The literature review also illuminated the fact that the majority of studies on connectedness have been done using self-report methods through surveys, questionnaires, or interviews. The reason for this could be that connectedness is a non-cognitive intrinsic construct that is difficult to measure directly through observation. Additionally, various forms of bias are inherent in self-report data. To mitigate this, researchers have paired measurement instruments of the same construct. In nearly all studies reviewed, the authors recommended additional study to further explore the construct of connectedness itself. For the purposes of answering the research questions for the AISU Administration regarding the unique school interventions of Crew and Intensives, the decision was made to use Creswell's (2015) Explanatory-Sequential design. It is well suited to mitigate bias through the combined quantitative and qualitative approach to provide the deeper understanding the administration sought.

CHAPTER III

METHOD

The purpose of this study was to investigate the extent to which AISU was progressing toward meeting the goals of its charter with respect to the Tenets of Democracy. Administrators were interested in the degree to which secondary student's associate perceptions of connectedness with the AISU school environment and with participation in Crew and Intensives. A mixed methods Explanatory Sequential research design (Creswell, 2015) was used. Research questions, design, participants, setting, data sources, instruments, procedures, and data analysis are described in this section.

Research Questions

RQ1. To what extent do AISU secondary students report perceptions of connectedness?

RQ2. To what extent does participation in Crew promote perceptions of connectedness among secondary students?

RQ3. To what extent does participation in Intensives promote perceptions of connectedness among secondary students?

Research Design

Explanatory Sequential design is considered to be mixed method research. Mixed methods research in the behavioral, health, and social sciences is the combination of both quantitative and qualitative data (Creswell, 2015). The investigator integrates the two

kinds of data, and then interprets the results based on the combined strengths of both data sets (Creswell, 2015; Hesse-Biber, 2010; Terrell, 2011). Additionally, a mixed methods design includes all aspects of the research procedures from the “philosophy, to the questions, and on to the data collection, analysis, and interpretation” (Creswell, 2015, p 123).

An Explanatory Sequential design includes two phases. The “first use quantitative methods and then use qualitative methods to help explain the quantitative results in more depth” (Creswell, 2015, p. 138). Specifically, the investigator studies a problem by beginning with a quantitative strand to both collect and analyze data, and then conducts qualitative research to explain the quantitative results. Quantitative results can determine whether observed differences are statistically significant, provide confidence intervals, effect sizes, and provide general outcomes of a study, and be used for interpretation. By adding a qualitative stage to help explain the quantitative results, the “two stages build upon each other so that there are distinct, easily recognized stages of conducting the design” (Creswell, 2015, p. 38).

Explanatory sequential research designs are sometimes challenging to conduct because of the additional time required to implement two distinct stages in sequence. Determining which of the quantitative results need further explanation can be another challenge. When determining what results need more investigation, Creswell (2015) suggests that researchers consider following up with participants that have certain demographic characteristics, expanding the investigation to explain important or surprisingly unimportant variables, and looking closely at outliers from the quantitative

results (Creswell, 2015). As recommended, analysis of demographic characteristics was included in this work.

Further, the use of multiple data sources can enhance credibility to research (Baxter & Jack, 2008; Rossman & Wilson, 1985; Yin, 2003). For the AISU study, two main data sources were used. The first data source was a quantitative measure known as the Hemingway Measure of Adolescent Connectedness written by Michael Karcher (2011). It was administered, with permission from Dr. Karcher, to a group of secondary students at AISU to gather quantitative data on perceptions of connectedness (see Appendix B for detail on permission received from Dr. Karcher.). The second data source was a qualitative data collection technique known as a researcher developed semistructured interview. This instrument was administered to volunteers from the groups of secondary students who participated in the Hemingway Measure of Adolescent Connectedness.

The Hemingway Measurement of Adolescent Connectedness is a Likert-style survey that includes composite scores and cluster scores. Cluster scores are referred to as Subscale scores in this study. The results from the quantitative Hemingway survey were analyzed to determine what themes need further investigation. To learn more about the themes requiring more investigation, questions for a semistructured interview were developed and revised based on quantitative results.

An advantage to using the Hemingway is that it has been formally validated to measure the construct of connectedness with adolescent populations. To validate the Hemingway, Karcher (2011) conducted a study on its psychometric properties that

examined the internal consistency, test-retest reliability, and convergent validity of the composite and subscales.

Internal consistency is used to determine the reliability of the scale being used. This was an appropriate measure since the Hemingway uses multiple Likert-type scales. Results are calculated using Cronbach's alpha which measures how closely related a set of items are, as a group. An alpha coefficient of .70 or higher is generally acceptable in social science research (Bruin, 2006). The validation study of the Hemingway showed that, on a sample of 439 youths, all but two of the scales demonstrated reliability across all populations in the good ($\alpha = .70 - .80$) to very good ($\alpha = .80 - .90$) ranges.

Test-retest reliability measures the extent to which a test or other instrument administered at one time is correlated with the same test or instrument administered to the same people at another time. If the comparison of the two measures results in a high correlation coefficient between the scores, it can be concluded that there is evidence of high test-retest reliability (Price, Jhangiani, & Chant, 2015). Reliability coefficients have a scale of 0 to 1, where 0 denotes that there is no reliability and 1 indicates perfect reliability. Acceptable reliability is ≥ 0.7 . Good reliability is ≥ 0.8 and excellent reliability is ≥ 0.9 . Correlation coefficients for the Hemingway scales showed that all but one had reliability coefficients above 0.7. Thirteen subscales had reliability coefficients above .80 and three above .90. The one coefficient lower than .70 was just slightly below at .68 and associated with connectedness to "Self-in-Future," which was not a subscale evaluated specifically in this study.

Convergent validity refers to the degree to which two measures of a construct,

that are theoretically expected to be related, are actually related. This is demonstrated by scores that converge despite the fact that they are obtained from two different measurement procedures on the construct of interest (Laerd Statistics, 2016). Validity coefficients can range from 0 to 1 like other correlational coefficients, however, in tests of convergent validity, most results tend to range from 0 to .50 where 0 is a weak validity and .50 is moderate validity (Salkind, 2017). On the Hemingway, evidence of convergent validity was found for most of the subscales and composite scales (Karcher, 2011).

Surveys, like the Hemingway, are useful in describing the characteristics of a large population and increase the likelihood the results are statistically significant. The use of a survey, as the quantitative data source for this study, ensured that similar data could be collected from various groups, within AISU, and analyzed comparatively (Croasmun & Ostrum, 2011; Geldhof et al., 2015). Moreover, Likert-type surveys are useful in social science related research including those attempting to measure attitudes and perceptions (Croasmun & Ostrum, 2011). In addition, of note, a 5-point Likert-type survey with a sixth category for “unclear” was used in the Hemingway to constrain the responses to numerical denotations (Croasmun & Ostrum, 2011; Clasen & Dormody, 1994; Geldhof et al., 2015). The results of the Hemingway Likert-style survey guided the construction and revision of the semistructured interview questions.

The qualitative portion of this study was conducted using semistructured interviews. This type of interview allows respondents the freedom to express their views in their own terms (Cohen, 2006; Edwards & Holland, 2013, LaForest, 2009). Enhancing and clarifying data from survey data, semistructured interviews allowed deeper

investigation into the phenomenon being studied (Creswell, 2015). Though there is some freedom in responding, semistructured interviews can yield reliable, comparable qualitative data (Cohen, 2006; Edwards & Holland, 2013; Gibbs, 2007; Golafshani, 2003; Zilber, Tuval-Mashiach, & Lieblich, 2008).

Participants

Participants included middle and high school students who attend the American International School of Utah located in Murray, Utah. AISU is a K-12 public charter school whose charter focuses on competency and project-based learning. While only in the fourth of operation, AISU has award winning performing arts and STEM programs with substantive student participation rates. At the time this research was conducted, students who are Utah residents comprise 84% of the total participant population. International students make up approximately 16% of the student body. At AISU, middle school consists of sixth, seventh, and eighth grades. High school includes ninth through twelfth grades. AISU is located in a newly renovated facility with some amenities not available in traditional public schools.

AISU was chosen as the setting in which to conduct this research because of the unique educational and cultural model of this school and its familiarity and openness to the student researcher. The student researcher is on the Board of Directors for AISU. This has advantages because of the researcher's substantive familiarity with the student population, the nature of Crew, Intensives, and the other academic and cultural features of the school. This could also be a disadvantage if there are negative perceptions of the

Board of Directors by AISU personnel, students, or parents. This may cause them to resist participating or do so without the standards of fidelity desired. To mitigate any potential interference stemming from perceptions of the Board, the survey and interview questions were delivered and deployed directly to students by AISU administrator Janae Powell. Additionally, any communication about this research with parents, Crew leaders, or students was done through this administrator (see Appendix C for information on communications sent to parents, see Appendix D for detail on communications sent to students, and see Appendix E for information on communication with Crew leaders).

When this study was completed, there were 41 middle- and high-school Crews at AISU. Each Crew is known by a unique number and consists of 20 to 30 students led by a Crew Leader. There are approximately 942 secondary students enrolled at AISU. The middle school student has 364 students, and the high school has 578 students. There were 15 middle school Crews and 26 high school Crews.

The original study proposal included all middle and high school students at AISU in this study. However, a revision to the proposed procedure was completed and approved by the Utah State University's Institutional Review Board after administrators at AISU asked that the researchers constrain the number of participants to three Crews from middle school and three Crews from high school, rather than include the entire population of middle and high school students (see Appendix F). This reduced the number of participants to 134 for the Hemingway and 28 interview volunteers. Even with a reduced number of participants, the response numbers on the Hemingway were large enough to meet the requirements to yield meaningful results.

The Crews were chosen for participation by AISU administrators. The student researcher was not involved in or informed of which Crews were chosen, except that three were high school Crews and three were from middle school. Only individuals who had completed the Hemingway were given access to participate in the interview. In addition, to be included in the Hemingway and the semistructured interview, students agreed to participate through the youth assent form, and received consent from their parents (see Appendix G for information on the Youth Assent form, Appendix H for detail on the Parental Informed Consent Form – English, and Appendix I for information on the Parental Informed Consent Form – Spanish).

Hemingway Measure of Adolescent Connectedness Participants

Of the 134 participants who completed the Hemingway, 74 were high school students and 59 were in middle school. Respondents included females, males, and individuals who preferred not to identify a gender. Races represented in the participant pool were Caucasian, bi-racial, Hispanic, American Indian or Alaska Native, Black, Native Hawaiian or Pacific Islander, and other.

As the construct of connectedness often includes familial relationships, participants were asked who they live with. Responses showed a range of family living arrangements including living with both parents, with their mother primarily, with someone other than their parents, or living predominantly with their father.

All middle and high school students who were present in Crew on the day of the survey administration and for whom parental consent has been obtained, were given an

online version of the Hemingway Measure of Adolescent Connectedness. Results were collected electronically within the Qualtrics™ research platform available to USU students under a licensing agreement. Analysis of Hemingway results was completed using the tools available in Qualtrics™ and IBM™ SPSS Statistical software. The Hemingway includes one item in each of the Subscales that was worded in a negative manner, different from all other positively worded items. This method helps ensure validity of the results. As specified by the Hemingway administration and scoring manual and required for accuracy, these items were reverse scored prior to making calculations and performing analyses.

Semistructured Interview Participants

Since the purpose of the semistructured interview was to learn more about results found in the quantitative portion of this study, a small number of participants yield the details needed to further explore quantitative results (Creswell, 2015; Guetterman, 2015). Therefore, even the reduced number of participating Crews, the number of interview participants was sufficient to provide meaningful data.

Volunteers for the semistructured interview included 28 middle and high school students. Respondents included 11 middle school and 17 high school students. Nine females and two males from middle school Crews completed interviews. Seven females, six males, and four individuals who did not identify a gender participated in the interview from the high school Crews. Of the interview respondents, races reported were limited to Caucasian and Hispanic.

The number of years a student has attended AISU was also of interest to the researchers as it may inform interpretation of the results of the study. Of the students who completed the interview, the majority of them had attended AISU for 3 years, approximately one third had attended AISU for 2 years, and the remainder had attended for one year. Given the few numbers of interviewees who had attended less than 3 years, comparisons were not made between those groups.

Setting

The administration of the Hemingway survey was conducted on AISU school property during the regularly scheduled Crew meeting time. The Crews selected to participate in the study meet at the same time as all other Crews. Additionally, since all students at AISU have access to and regularly use an Internet accessible laptop computer or netbook, the Hemingway was delivered to all participants simultaneously via the Qualtrics™ online survey tool provided by USU.

Students who participated in the interview, also used the online tools available through the of Qualtrics™. Interviews were completed by students at a time and place of their choosing, but within the submission time frame requirements as specified. Allowing the opportunity for students to complete their interviews at a time and place of their choosing was intended to help them feel comfortable responding to the two components of this study. Eder and Fingerson (2002) suggest that participant responses were more accurate and in depth when interviews are completed in comfortable surroundings.

Material

Participants used their own laptops or netbooks participate in this research. In some cases, students may have elected to complete their survey or interview on a mobile device or tablet. Internet access was protected, limited, and monitored by the school in compliance with the local and federal guidelines. No students reported that they could not access the interview or had any trouble with connectivity when completing the interview.

The Hemingway Measure of Adolescent Connectedness is traditionally delivered in a paper and pencil format. For this study, however, the Hemingway was converted into an online format by the researcher so it could be delivered electronically. Hosted through the USU instance of the Qualtrics™ survey delivery tool, students were then able to access the Hemingway survey through a link via their laptop or netbook.

For the qualitative part of this study participants accessed interview questions through a link to the Qualtrics™ platform via their laptop, netbook, mobile device, or tablet. The interview form included open-ended questions crafted to adhere to the semistructured interview methodology. Characteristic of a semistructured interview, topics were presented as open-ended questions that were carefully designed to elicit the views of the participant without imposing influence upon their answer. Questions were phrased in a way that used common vocabulary so that students could easily understand what was being asked and have plenty of space and time to respond. Allowing students to complete the interview at their own leisure offered a level of comfort and casualness that is often used in this type of research to promote honest answers to the questions.

Parent permission and youth assent forms were generated by the researcher in

compliance with USU's Institutional Review Board requirements. Written communications, informational material and recruitment flyers were also crafted according to Utah State University's Institutional Review Board requirements, approved, and provided to relevant parties and collected within the Qualtrics™ platform.

Data Sources/Instruments

Two instruments were utilized during the data collection stage of this study. The quantitative stage gathered data from the Hemingway Measure of Adolescent Connectedness Short Form by Michael Karcher (2011). A semistructured interview created by the researcher was used to collect qualitative data.

Hemingway Measure of Adolescent Connectedness

The Hemingway was validated by Dr. Karcher in 2003 and again in 2011 when a revised version was created. Detail of the validation studies were presented previously. Additional information can be found in the technical manual for this instrument. The Hemingway uses a Likert-type scale to which participants indicate the degree to which they agree with the statement prompt. Overall connectedness scores are calculated from aggregating all of the responses. Subscales measuring discrete features of connectedness are also available on the Hemingway. Subscales evaluated for this study include Friends, Peers, Teachers, and School. Evaluation of the Subscale Friends was added after initial results of analysis suggested differences may exist between student's connectedness to their personal friends with whom they choose to associate and peers who are students

with whom they are compelled to interact with based on their course membership assigned by AISU administrators.

Subscales consist of six items. In each of the Subscales, one of the items is phrased in reverse. For example, the Subscale for School includes the following questions: I work hard at school (#6). I enjoy being at school (#16). I get bored in school a lot (#26). I do well in school (#36). I feel good about myself when I am at school (#46). Doing well in school is important to me (#56). Item 26, "I get bored in school a lot." is a negative view of school whereas the other five items are phrased to show a positive view of school. Including a reversed item in survey research is a common practice used to help ensure the validity of the results. Adding a negatively worded item helps identify responses that may individuate that an individual simply selected the same rating on all questions without giving much thought to the question being asked. Those types responses can be eliminated from consideration, if needed.

Semistructured Interview

The semistructured interview is an effective way to examine the research topic or focus from more than one vantage point (Birley & Moreland, 2013; Creswell, 2015). Semistructured interview questions were created by the student researcher following an analysis of quantitative data gathered from the Hemingway. During the proposal stage of this study, some initial interview questions had been developed for approval by the USU Institutional Review Board. These questions aligned with the Hemingway survey and specifically addressed each of the three research questions. After participants completed the Hemingway, the interview questions were refined and revised based on the survey

results. The interview questions were hosted in the Qualtrics™ system where the open-ended questions were delivered electronically. Participants typed responses into the fields available where they were archived and accessible for analysis.

Procedures

To answer the three research questions, this investigation included two major data collection efforts consistent with the Explanatory Sequential research method being used (Creswell, 2015). The Hemingway Measure of Adolescent Connectedness provided answers to Research Question #1, “To what extent do AISU students report perceptions of connectedness?” The semistructured interview provided deeper insight into the results of RQ #1 and offered a focused look at how Crew and Intensives might be influencing student perceptions of connectedness through RQ #2 and RQ#3.

Students assigned to each of three middle school and three high school Crews were invited to participate in this study. Necessary permissions were obtained from AISU Board of Directors, Administration, parents, and students prior to commencement of the investigation. Though Crew leaders were not involved in this study, it was conducted during regularly scheduled Crew time. To ensure smooth implementation of the study procedures for participants, the AISU administrator who facilitated this study provided the affected Crew leaders with relevant logistical information.

During Crew time on the designated day, participants received the link via email to access the Hemingway from the AISU administrator. At this same time, students were also invited to volunteer for the interview in the email they received and given directions

on how to do so. Hemingway results were collected electronically through Qualtrics™ and then analyzed to identify the extent to which students reported perceptions of connectedness.

Data from the Hemingway survey were ordinal and, therefore, medians were calculated for comparison rather than means. Frequencies showed that data for the Subscales were not normally distributed; therefore, the Kruskal-Wallis H test for nonparametric data was used to determine if there were any differences between the groups were statistically significant at the alpha level of .05.

Revisions to the initial semistructured interview form were made based on the results of the Hemingway in order to learn more about the extent to which connectedness was associated with Crew and Intensives. Volunteers were given the link to the semistructured interview questions hosted in Qualtrics™ via email. Participants were given a timeline of two weeks to complete the interview.

Interview results were evaluated using traditional deductive coding techniques. Initial codes were identified by the researcher, and then refined and revised as results were analyzed. Interview response examination was completed primarily with the use of the text analysis tools within the Qualtrics TextiQ™ tool provided by USU. This tool uses machine learning and native language process to identify patterns and trends in open text responses. Those trends are automatically prioritized and presented visually. Filtering, analysis, and reporting features within Qualtrics TextiQ™ were used by the researcher to examine interview question responses. The researcher also used spreadsheet tools to analyze interview results to determine and organize the revised set of codes.

The remainder of this section explains the procedures in more detail. It describes the process of obtaining permission to conduct this study. It then describes how the study was carried out. This section concludes with an explanation of how each of the three research questions were answered.

Permissions and Protections

Prior to commencing research, appropriate approvals were received from all relevant parties affiliated with the AISU, USU Emma Eccles Jones College of Education and Health Services, and the USU Institutional Review Board (see Appendix J for information on the approval from the AISU Board of Directors Chairman).

A revision to the proposed procedure was sought and approved by the USU Institutional Review Board after administrators at AISU asked that we constrain the number of participants to three Crews from middle school and three Crews from high school, rather than include the entire population of middle and high school students.

To reduce any possibility of perceptions of coercion, intimidation, or discomfort due to the formality of a USU research project and the student researcher's role as a member of the board of directors, all study information was disseminated through the regular AISU communication channels by school administrators. Recruitment and study information was provided to parents and students by AISU Administrators. Necessary formal notice was also provided to parents and students. Permission for student participation was obtained from parents and guardians. Students in each of the participating Crews were given Youth Assent forms to review and complete. These forms provided students with information about the study and provided an opportunity for them

to express their level of desire to participate in the study. All permission and assent forms were distributed from and collected in the Qualtrics™ platform.

Study Implementation Facilitated by AISU Administrators

To assure the maintenance of proper separation between the researcher and the participants, the researcher was not given any information about the Crews, their leaders, or students. The only information shared with the researcher was that three middle school and three high school Crews had been selected by AISU administration to participate.

The Crews that participated in this study were selected by the onsite Administrator, Janae Powell, who replaced Steven Merrell. Mr. Merrell was originally identified in the study proposal as the designated AISU administrator who would facilitate the implementation of this study. Unfortunately, Mr. Merrill left the employ of AISU between the time the proposal for this study was approved and the time it commenced. The AISU school director chose Ms. Janae Powell to replace Mr. Merrell.

Crew leaders did not actively participate in any part of the research implementation, instrument delivery, or data collection. They were given a high-level explanation of what would occur during their Crew period on the day of this stage of the study. They were told that students for whom parent permission had been received, would be completing a survey as part of a formal research project through Utah State University. They were given an overview of the logistics of the study implementation and asked to provide an activity for any of their Crew members who were not participating in the research. Crew leaders were made aware that some of their students might also be participating in an interview and were asked to accommodate completion if it occurred

during Crew time.

Study Stage 1: Quantitative Investigation

The researcher provided Ms. Powell with the electronic documents and links to the study information and recruitment flyer, parent information, parent permission forms, youth assent forms. She was also provided with the link to the Hemingway Measure of Adolescent Connectedness that were hosted in the USU Qualtrics™ instance. Ms. Powell distributed the parent information and permission forms, and participant recruitment information as specified in the study procedures.

The requisite parent permission and youth assent completion period was completed. On the designated day, during Crew time, Ms. Powell distributed the link to the Hemingway to the participating students. Directions on how to complete the survey were included in the email they received from Ms. Powell. Directions were presented again on the Hemingway survey itself. Respondents, then completed the survey. Results were collected within the Qualtrics™ system.

Completing the Hemingway survey took most students approximately 10 -15 minutes. Students who were absent from Crew on the day when the Hemingway was administered were excluded from participation in this stage of the research. Each respondent was allowed to submit only one response to each instrument.

To adhere to the administration requirements of the Hemingway and to facilitate more thorough data analysis, some basic demographic information was collected through the Qualtrics™ system. Student names were not collected on the Hemingway or on the interview protocol, but information such as grade level, ethnicity, and gender, were

collected and used in the analysis of the data.

Consistent with procedures characteristic of the explanatory sequential research design, the investigator evaluated the results of the Hemingway survey. Analyses were completed using the tools available in Qualtrics™ and IBM™ SPSS statistical software to determine what aspects of connectedness warranted further investigation through the semistructured interviews. Informed by the quantitative results, revisions to the semistructured interview questions were made and a final interview protocol created.

Study Stage 2: Qualitative Investigation

At the designated time, Ms. Powell gave interview volunteers the link to the final interview protocol for the semistructured interview. Interviewees accessed the interview questions through the link. They completed the interview questions at their own leisure within the 2-week period of the response submission open period.

To allow students maximum scheduling flexibility and privacy, interview questions were presented to students in written online form delivered through the Qualtrics TextiQ™ tool. Rather than responding to interview question orally, interview participants typed responses into text fields below each question. This method captured student responses, prevented interviewer transcription error, eliminated the need to record and transcribe interviews, and allowed the student researcher to utilize the qualitative text analysis tools available in Qualtrics™. None of the interview participants reported lack of keyboarding fluency that impeded his or her ability to respond to the interview questions by typing responses.

To promote more honest and complete responses, participants were allowed to

choose the time and location where they completed the interview (Eder & Fingerson 2002). The interview was not timed, so participants had ample time to complete the interview. Depending upon how extensive the written response was, interview completion times ranges from approximately 10 to 30 minutes.

Due to the reduced sample size that resulted from AISU's request that the researchers only include six Crews, all interviews completed by students were included in this study. The approval for this deviation from the original proposal was approved by the USU Institutional Review Board.

Data Management

Data collected through this study were kept anonymous, where possible, and confidential as appropriate. The Hemingway and the semistructured interview were delivered through the USU Qualtrics™ and Qualtrics TextiQ™ tools. Only individuals with the link to the forms had access to the data collection instruments. Respondents to the Hemingway survey were only identified by the date and time stamp on the record, and their reported demographic information. The online version of the Hemingway did not collect participant names.

Participants who completed the interview were instructed to create a unique ID number. Instructions for doing that was included on the interview form and stated "Create an interviewee ID by typing the initials of your first and last name and any three numbers in this space (example JD435)" (see Appendix I for information on the interview instructions sent to participants). The list linking student identification numbers to time

and date stamps were recorded, saved, and password protected in a secure, password protected Qualtrics™ and cloud-based application. The researchers are the only ones who have access to the lists of interview participants. Very little personally identifiable information emerged from the two instruments used. Any personally identifiable information was deleted after the duration of the study and written documentation stage. Data acquired through this study will be kept for three years and then will be deleted from any computers, cloud-based applications, and any paper response or coding sheets will be destroyed.

Data Analysis

This explanatory sequential study began by investigating the extent to which secondary students at AISU reported perceptions of connectedness on a quantitative measure, the Hemingway Measure of Adolescent Connectedness by Michael Karcher (2011). Results of Hemingway were analyzed. These findings guided the creation and revision of semistructured interview questions intended to provide the researcher with a deeper understanding of the Hemingway results. Specific areas of focus, of this qualitative element, were student perceptions of connectedness associated with their participation in Crew and Intensives. This section describes the quantitative and qualitative analysis methods that were used to analyze the data.

To answer Research Question #1, the results of the Hemingway Measure of Connectedness were calculated for the overall connectedness scores and each of the subscales: friends, peers, teachers, and schools. Survey data is ordinal, so medians and

frequencies were calculated. The resulting data was not normally distributed so the Kruskal-Wallis H test, a nonparametric test was used to determine if there were differences between groups. Additionally, two of the demographic categories had to be collapsed because of small sample sizes. Minority races were combined into a single category called “non-White” and compared to the “White” category. Similarly, for the living arrangement category, anyone who did not live with both parents was included in a “One-parent” category.

Kruskal-Wallis H Test

The Hemingway uses a Likert-type scale with five response choices producing ordinal data. Answering the research questions, required the comparison of several groups such as grade placement, gender, race, and family living arrangement. After examining the frequencies of the Hemingway, results showed that the full-scale score distribution was non-normally distributed ($Mdn = 200$) and skewness of -1.91 and kurtosis of 6.59. The distribution of Friends subscale ($Mdn = 26$) was non-normally distributed, with moderate skewness of - 0.91 and kurtosis of 0.24. Similarly, the distribution of the Peers subscale was non-normal ($Mdn = 21$), with skewness of -0.61 and kurtosis of 0.5. The distribution of the teacher subscale was also non-normally distributed ($Mdn = 25$), with moderate skewness of -0.64 and kurtosis of 0.09. Lastly, the distribution of the School subscale was non-normally distributed ($Mdn = 23$), with moderate skewness of -0.67 and kurtosis of 0.73. Therefore, it was necessary to use a method for analyzing nonparametric data (Clasen & Dormody, 1994; Laerd, 2016;

Nunnally, 1978).

The Kruskal-Wallis H test was chosen as it does not assume normality in ordinal or continuous data. It was chosen over the Mann-Whitney U test because it can be used to determine whether or not results are statistically significant differences between two or more groups. To apply the Kruskal-Wallis H test accurately, the data must meet four assumptions. The first three assumptions are dictated by the study design. They are (1) one dependent variable that is measured on an ordinal scale – in this case perceptions of connectedness; (2) one independent variable that consists of two or more categorical, independent groups; and (3) independence of observations. Assumption (4) is dependent on the shape (variability) of the distributions of the resulting scores.

The Hemingway study design met each of the first three assumptions needed for the Kruskal-Wallis H test. The results met the fourth condition with distributions with similar variability, so medians were used (Laerd, 2016).

Deductive Coding Analysis of Qualitative Data

To learn more about RQ1 and to answer RQ2 and RQ3, analysis of semistructured interview data consisted of traditional deductive coding techniques to identify, analyze, and reduce themes that manifest perceptions of connectedness generally, and those associated with participation in Crew and Intensives (Gibbs, 2007; Gilgun, 2014; Hesse-Biber, 2010). Initial coding was completed using preliminary terms associated with theories and concepts contained in existing connectedness research. Based on the review of literature, this first set of codes included terms that represented perceptions of connectedness to friends, peers, teachers, and AISU as a school. Analysis of interview

responses consisted of coding and analysis of those filtered using the text analysis tools in Qualtrics™ and examination by the demographics of grade placement as middle or high school, gender and race. Text analysis tools included in Qualtrics™ include tools that identify word frequencies, word patterns, and topic themes. It allows for the classification of topic hierarchies, filters, and reports that were used to assist in the response analysis

Based on findings and data disaggregation, codes were then refined by combining and collapsing them into a manageable set of codes that represent the most essential elements and themes. The revised codes were categorized by major elements and subsets of major topics. The revised codes included (a) AISU as a school, (b) relationships, (c) social environment, (d) learning environment, (e) autonomy, (f) achievement, and (g) individual experience. These prioritized codes were then analyzed in more depth (Gilgun, 2014; Hesse-Biber, 2010). Analysis and interpretation of the data was assisted through the use of qualitative text analysis software within the Qualtrics™ platform. Additionally, researcher created spreadsheets and color coding was used to categorize and compare responses using the revised codes. All responses were placed into at least one of the revised code categories. Some responses addressed more than one revised code category and were placed under both and considered in the analysis of each category.

CHAPTER IV

RESULTS

The purpose of this study was to determine the extent to which secondary students at the American International School of Utah report perceptions of connectedness as reported on the Hemingway Measure of Adolescent Connectedness (Karcher, 2011). The Hemingway subscales of connectedness to peers, friends, teachers, and, school were also analyzed.

To gain deeper understanding of the quantitative results of the Hemingway, this study, through a qualitative semistructured interview, looked deeper into the extent to which connectedness was reported by secondary school students. More specifically, the semistructured interview examined perceptions of connectedness as it related to participation in the school-level interventions of Crew and Intensives.

Demographics

The Hemingway was completed by 134 participants. Of the respondents, 60 were middle school students and 74 were high school students. Table 1 presents demographic information for the participants in terms of secondary grade placement as middle school or high school. Table 2 presents the gender of the all respondents, which included 64 females, 63 males, and 7 people who preferred not to provide an answer for gender.

Tables 3 and 4 present the demographics in terms of identified race or ethnicity. The majority of participants identified themselves as being White. Other racial or ethnic identities included Bi-racial, Hispanic, American Indian or Alaska Native, Black, Native

Table 1

Hemingway: Middle or High School Grade Placement

Grade placement	<i>n</i>	%
Middle school	60	44.8
High school	74	55.2
Total	34	100

Table 2

Hemingway: Gender of Participants

Gender	<i>n</i>	%
Female	64	47.8
Male	63	47.0
Prefer not to answer	7	5.2
Total	134	100

Table 3

Hemingway: Race/Ethnicity

Race/ethnicity	<i>n</i>	%
White/Caucasian	98	73
Bi-racial	9	7
Hispanic	7	5
Other	5	4
American Indian or Alaska Native	5	4
Asian	4	3
Black	3	2
Native Hawaiian or Pacific Islander	3	2
Total	134	100

Table 4

Hemingway: Race/Ethnicity Combined Non-White

Race/Ethnicity	<i>n</i>	%
Non-White	36	27
White	98	73

Hawaiian or Pacific Islander, and Other. Unfortunately, the numbers of respondents in the each of non-White racial identification categories were fewer than ten. In order to achieve an adequate sample size for comparison, all the non-White races were combined into one group, called “non-White” to be compared with the “White” students.

Table 5 presents demographics of participant family living arrangements. Nearly three quarters of all participants reported living with both parents. Students who live primarily with their mother represent 23% of the respondents. Four students reported living primarily with someone other than their father or mother. Three students stated that they live primarily with their father. Since there were so few students who reported living primarily with their fathers or someone other than their parents, the decision was made to combine the three groups where children lived in a situation other than with both of their

Table 5

Hemingway: Family Living Arrangement

Family living situation	<i>n</i>	%
Both parents	96	72
Mother, primarily	31	23
Other	4	3
Father, primarily	3	2
Total	134	100

parents into a group called “One-parent.” Table 6 summarizes the combined groupings used for comparison.

Table 6

Hemingway: Family Living Arrangement, Combined One Parent

Family living situation	<i>n</i>	%
One parent	38	28
Both parents	96	72

Research Questions

The three questions that guided this explanatory sequential research were as follows.

RQ1. To what extent do AISU secondary students report perceptions of connectedness?

RQ2. To what extent does participation in Crew promote perceptions of connectedness among secondary students?

RQ3. To what extent does participation in Intensives promote perceptions of connectedness among secondary students?

Data Analysis and Results: Quantitative Stage

The dependent variable in this study was perceptions of connectedness. Primary independent variables in this study included (1) the condition of being a secondary student at the AISU, (2) participation in Crew, and (3) participation in Intensives. Four demographical independent variables were also examined; (a) middle or high school grade placement; (b) gender (c) race, and (d) family living arrangements.

Hemingway Measure of Adolescent Connectedness

The Hemingway Measure of Adolescent Connectedness-Short Form provided the quantitative element of the first stage of this study. In this part of the analysis, the primary dependent variable was perceptions of connectedness represented by the Hemingway Composite score. More complete interpretation of the results required individual examination of smaller units of the dependent variable, namely the subscales of connectedness to friends, peers, teachers, and school.

The data on the Hemingway is ordinal where participants rate their level of agreement on a 1 to 5 Likert-type scale. The higher the rating the higher the perception of connectedness. To generate scores for comparison, the ratings were assigned the numerical value associated with the rating then summed. A rating of 5 was given a value of 5. The rating of 4 was given a value of 4 and so on. As required by the assessment specifications manual, the ratings of the negatively written items were reverse scored prior to being included in the sums. For example, Item 2 is negatively worded so the ratings that indicate more connectedness would be 1 and 2 whereas those indicating less connectedness would be 4 or 5. Since that is the opposite of the positively worded items before these responses were included in the sum. A rating of 1 was given a value of 5, and a rating of 2 was given a value of 4. Similarly, a rating of 5 was given a value of 1, and a rating of 4 was given a value of 2. A rating of 3 retained the value of 3.

The descriptive values used in this stage of the analysis present the medians of the sums of ratings. The composite score includes ratings for all 57 items on the Hemingway-Short Form with the highest possible score being 290. The median for composite score

was 206.5. Each of the subscales included six questions with the 30 as the highest possible sum. The scores for connectedness associated with friends had the highest median of 26. Connectedness with peers was lowest with a median of 21. Connectedness with teachers resulted in a median of 25 and connectedness with school had a median of 23. Results are summarized in Table 7.

Table 7

Hemingway: Descriptive Statistics Composite and Subscales

Connectedness	Sum possible	Median
Composite	290	206.5
Friends	30	26
Peer	30	21
Teacher	30	25
School	30	23

In some cases, the responses on the Subscales were combined to ensure the comparisons included enough participants for the results to be meaningful. For example, there were fewer than ten responses in each of the groups who identified their race as something other than White. All of those results were combined into a single group called “non-White” for comparison.

There were sufficient numbers of responses in each of the two grade placement categories to compare. Of the 60 middle school-aged students, the median for overall level of connectedness reported on the Hemingway was 209. The median for high school-aged students was 206. Table 8 summarizes the results of the Hemingway Composite score by grade placement in middle or high school.

Table 8

*Hemingway: Descriptive Statistics Composite Ratings
by Grade Placement*

Connectedness	<i>n</i>	Median
Middle School	60	209
High School	74	206

The genders of female and male also had enough respondents to be compared without having to combine categories. However, those who preferred not to answer had only seven respondents. The response from this group are denoted as “PNA.” It was determined the data should be included for consideration. However, with such a small sample, caution should be taken when interpreting the results from this group. Table 9 summarizes the medians of overall connectedness analyzed by gender.

Table 9

*Hemingway: Descriptive Statistics Composite Ratings
by Gender*

Connectedness	<i>n</i>	Median
Female	64	208.5
Male	63	206

There were 98 participants who reported their race as White and 36 who reported something other than White. For non-White individuals, the median for overall connectedness was 206. For White individuals, the median was 208.5. Results are presented in Table 10.

Table 10

*Hemingway: Descriptive Statistics Composite Ratings
by Race/Ethnicity*

Connectedness	<i>n</i>	Median
White/Caucasian	98	208.5
Non-White	36	206

Similarly, only the number of participants who live with both parents was a large enough sample for comparison. Though there were enough students who lived primarily with their mother to compare, there were only three responses where students lived primarily with their father. It was determined that to be able to include the data on fathers, it would be prudent to combine that data with those living primarily with their mother into a “One-parent” group. There were only four responses from individuals stating they lived with someone other than their parents. Since it was impossible to know the configuration of the “Other” living arrangement, those results were also included in the “one parent” group. The composite median for participants living with both parents was 212 and 200.5 for those living with one parent. Results are summarized in Table 11.

The next focus of analysis was the Hemingway subscales. Examinations were conducted on the subscale data separated by the same groupings used for comparisons of

Table 11

*Hemingway: Descriptive Statistics Composite Ratings
by Living Arrangement*

Connectedness	<i>n</i>	Median
Both parents	96	212
One parent	38	200.5

the composite data. Namely, grade placement, gender, race, and living arrangement. The results are described below.

The connectedness to Friends Subscale medians were 26.5 for both middle school-aged students and 25 for high school students. The medians for connectedness to Peers were somewhat lower at 22 for middle school and 21 for high school. Medians for connectedness to Teachers came out as 24 for middle school students and 25 for high school students. Connectedness to School results were medians of 24 and 23 for middle and high school respectively. Results are summarized in Table 12.

Table 12

Hemingway: Median for Subscale by Grade Placement

Connectedness	Middle school	High school
Friends	26.5	25
Peers	22	21
Teachers	24	25
School	24	23

When comparisons between genders were made, the medians for connectedness to Friends were 26 for females, 25 for males, and 27 for those who did not disclose a gender. The peer's subscale resulted in medians of 21 for females, 22 for males, and 22 for those who did not provide a gender. The subscale for teacher medians were 25 for both males and females, and 22 for individuals who did not state a gender. Similarly, on the subscale for school, the medians were 23 for females and males, and 22 for those who did not provide a gender. The medians for all of the subscales analyzed by gender are summarized in Table 13.

Table 13

Hemingway: Median for Subscales

Connectedness	Female	Male	PNA
Friends	26	25	27
Peers	21	22	22
Teachers	25	25	22
School	23	23	22

As was the case for the Composite analysis of race/ethnicity results, to ensure the subscale comparisons yielded meaningful results, the groups with fewer than 10 responses were combined into a single group of 36, referred to as “non-White,” and compared to the White group that had 98 responses. The Friends subscale had the highest medians of 24.5 for non-White students and 26 for White students. Next, the peers subscale was again higher for White students at 22, with a median of 20 for non-White students. The medians for the teacher subscales were 25 for Whites and 23.5 for non-Whites. The school subscale median for White students was 23.5 and slightly lower, at 23, for non-White students. The results are summarized in Table 14.

Finally, the Subscales were analyzed by participant living arrangement. In order to have a large enough sample size to provide meaningful results, the responses of

Table 14

Hemingway: Median for Subscales by Race/Ethnicity

Connectedness	White	Non-White
Friends	26	24.5
Peers	22	20
Teachers	25	23.5
School	23.5	23

mother, father, and other as primary living arrangements were combined into a single group of 38 called “one parent.” That group was compared to the “both parents” group of 96 participants.

The friend’s subscale had the highest medians of 26 for those living with both parents, and 25.5 for those living with one parent. Connectedness to peer’s subscale medians were 21 for participants living with both parents, and 22 for living with one parent. The medians for the teacher subscale were 25 for the both parent group, and 24 for the one parent group. Last, the medians for the school subscales were 24 for students living with both parents, and 23 for students living with one parent. Results are summarized in Table 15.

Table 15

Hemingway: Median for Subscales by Living Arrangement

Connectedness	Both parents	One parent
Friends	26	25.5
Peers	21	22
Teachers	25	24
School	24	23

After the medians were calculated and examined, the analysis of the frequencies obtained from the Hemingway Composite scale and Subscales revealed that results were not normally distributed. The distribution of the Hemingway full-scale score was non-normally distributed ($Mdn = 200$) and skewness of -1.91 and kurtosis of 6.59. The distribution of Friends subscale ($Mdn = 26$) was non-normally distributed, with moderate skewness of - 0.91 and kurtosis of 0.24. Likewise, the distribution of the Peers subscale

was non-normal ($Mdn = 21$), with skewness of -0.61 and kurtosis of 0.5. The distribution of the Teacher subscale was also non-normally distributed ($Mdn = 25$), with moderate skewness of -0.64 and kurtosis of 0.09. Lastly, the distribution of the School subscale was non-normally distributed ($Mdn = 23$), with moderate skewness of -0.67 and kurtosis of 0.73. Further analysis of the data required the use of a non-parametric method for determining whether or not there were differences in the distributions of the group responses.

Since the focus of this research was on school-level factors (Marzano, 2003), the distributions of the peers, teacher and school subscales were compared. Another comparison was made between the peers to friend's subscales. These categories are similar, but the peer's subscale is specifically affiliated with connection in the school settings. Results of all frequency distributions and comparisons are illustrated in Figures 2 through 8.

Kruskal-Wallis H Test

The Kruskal-Wallis H test, a nonparametric alternative to the one-way ANOVA, was chosen to determine whether or not there were any statistically significant differences between the independent variable groups. There are four assumptions that must be met in order to use the Kruskal-Wallis H test appropriately; (1) the dependent variable is measured at the ordinal or continuous level; (2) the independent variable consists of two or more categorical independent groups; (3) independence of observations; and (4) a determination must be made as to whether or not the distribution of scores for each group of independent variables have the same shape.

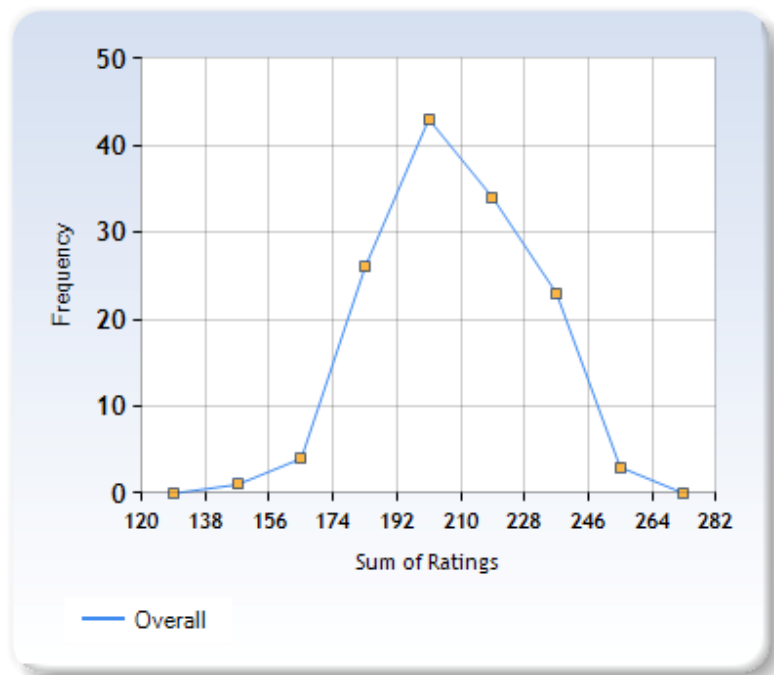


Figure 2. Hemingway: Frequencies, composite.

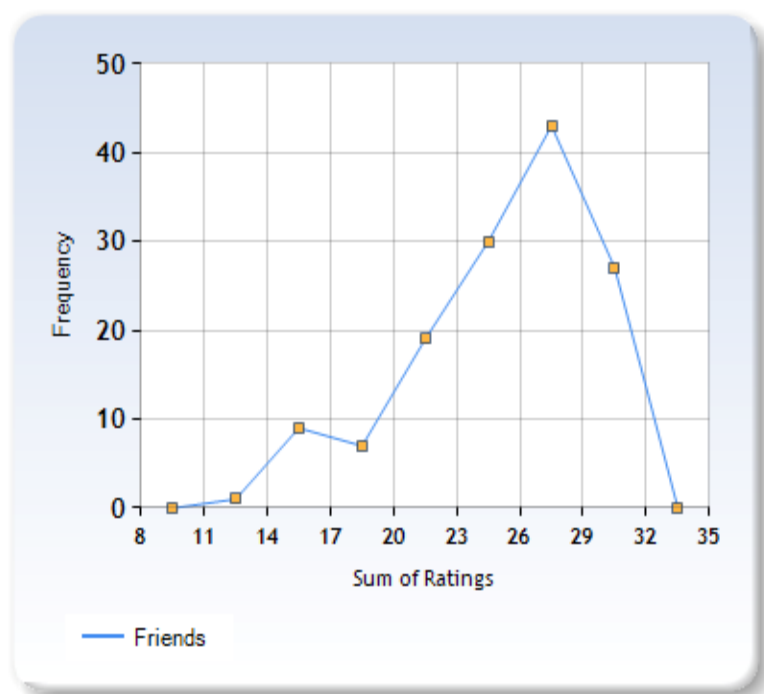


Figure 3. Hemingway: Frequencies, friends.

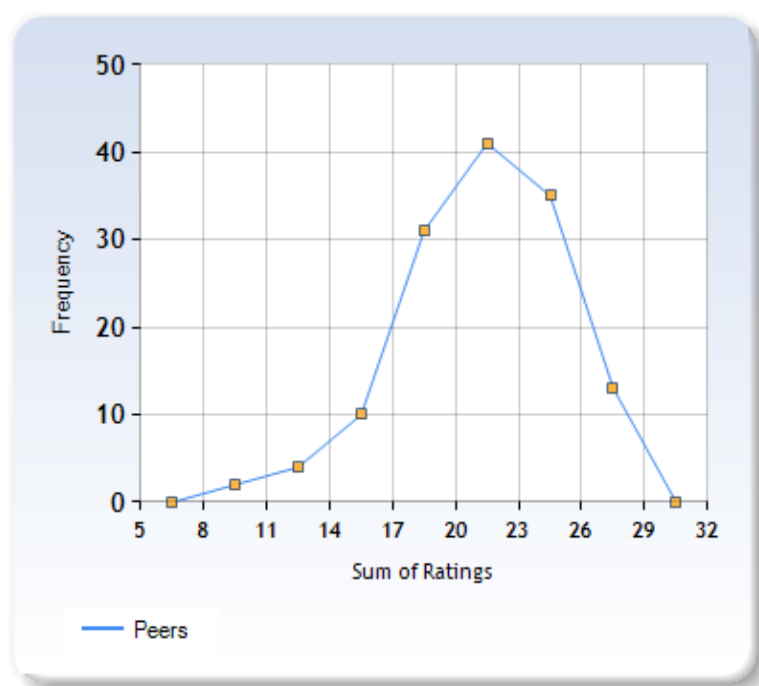


Figure 4. Hemingway: Frequencies, peers.

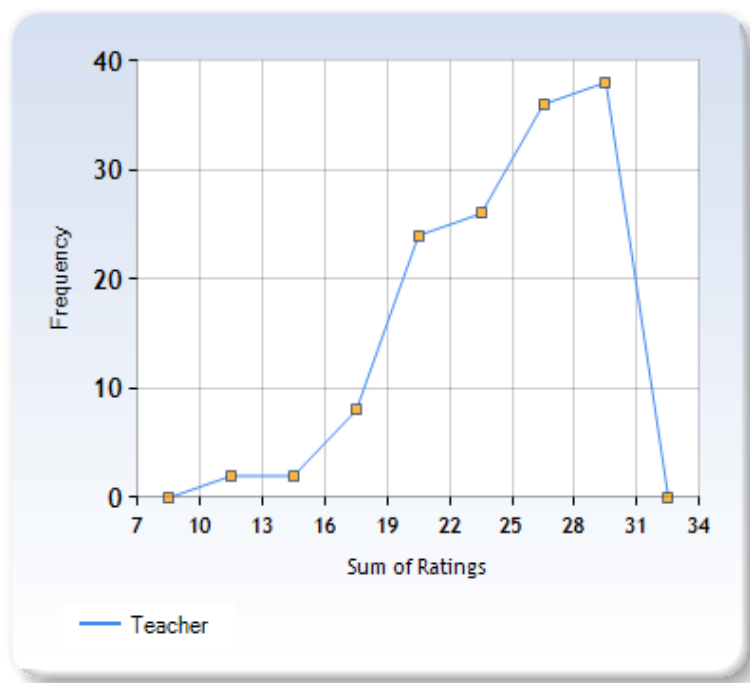


Figure 5. Hemingway: Frequencies, teachers.

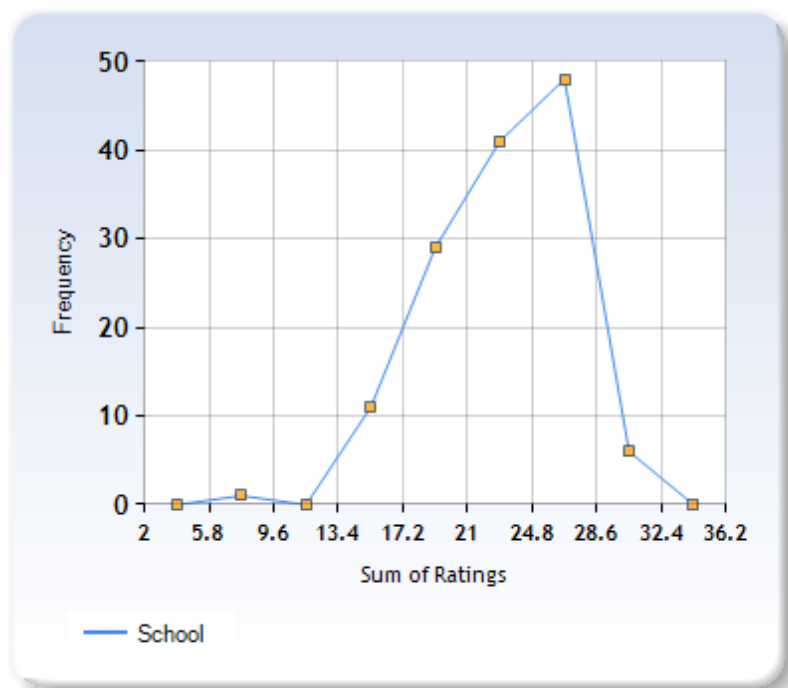


Figure 6. Hemingway: Frequencies, school.

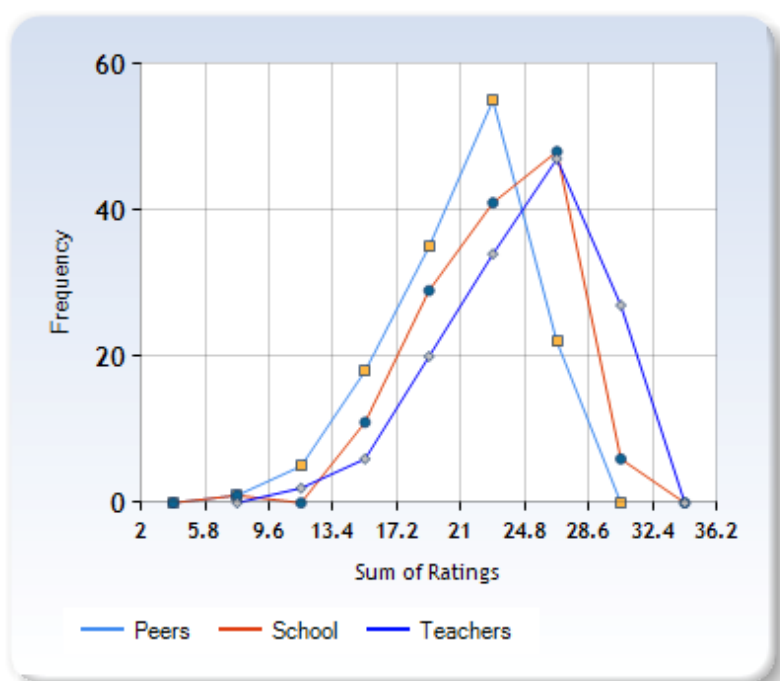


Figure 7. Hemingway: Frequencies comparison peers, school, teachers.

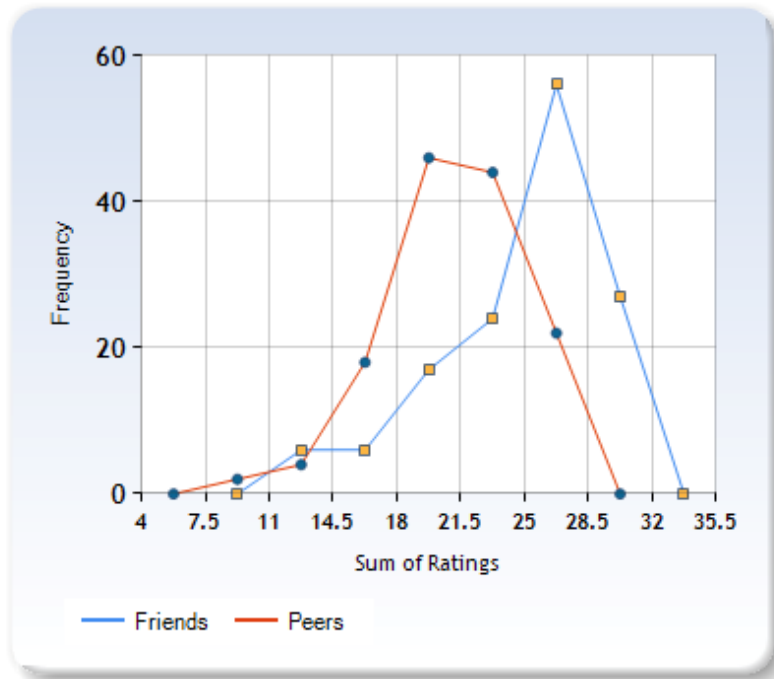


Figure 8. Hemingway: Frequencies comparison, friends, peers.

When the distributions have the same shape, the Kruskal-Wallis H test can be used to determine whether there are differences in the medians of the groups. When the distributions have a different shape, the Kruskal-Wallis H test is used to determine whether there are differences in the distributions of the groups. In this case, visual inspection of the distributions revealed that generally, the distributions of the Composite and Subscale scores had similar shapes that were skewed to the left. Examination of frequencies supported this conclusion. Therefore, a comparison of medians could be used.

Another important consideration for choosing the Kruskal-Wallis H test was that it can be used to compare more than two groups (Laerd, 2016). This test was chosen over the Mann-Whitney U, which can only be used to compare two groups. Moreover, given

the limited numbers of respondents in some of the groupings, the Kruskal-Wallis H test is appropriate with sample sizes as low as five. The null hypothesis for the Kruskal-Wallis is that the medians for the groups are equal. The alternate hypothesis is that the medians of the groups are not equal.

The Kruskal-Wallis H test was conducted using IBM SPSS Statistics Version 1.0.0-2437. The significance level was set to $p < 0.05$. As was done when calculating medians, the groups that were too small to be considered individually were combined to yield meaningful analysis.

The Kruskal-Wallis results showed that there were no significant differences of the independent variable groups for perceptions of connectedness overall as shown in Table 16.

Table 16

Kruskal-Wallis H Test: Connectedness Composite

Connectedness composite	Statistic	<i>df</i>	<i>p</i>	Decision
Middle or High School	0.6301	1	0.427	Retain the null
Gender	2.553	2	0.278	Retain the null
Race/ethnicity	1.247	1	0.264	Retain the null
Lives with	3.219	1	0.073	Retain the null

Similarly, the Kruskal-Wallis H test showed that there were no statistically significant differences in perceptions of connectedness when the associated with the Friends Subscale. Results are summarized in Table 17.

Table 17

Kruskal-Wallis H Test: Connectedness to Friends

Connectedness to friends	Statistic	<i>df</i>	<i>p</i>	Decision
Middle or High School	2.376	1	0.122	Retain the null
Gender	0.436	2	0.804	Retain the null
Race/ethnicity	3.142	1	0.073	Retain the null
Lives with	0.823	1	0.364	Retain the null

The Kruskal-Wallis analysis of the peer's subscale showed that there was a statistically significant difference between groups in the category of race $\chi^2(1) = 3.951$, $p = .047$. No other statistically significant differences were found. Results are summarized in Table 18.

Table 18

Kruskal-Wallis H Test: Connectedness to Peers

Connectedness peers	Statistic	<i>df</i>	<i>p</i>	Decision
Middle or High School	0.263	1	0.607	Retain the null
Gender	2.319	2	0.314	Retain the null
Race/ethnicity	3.951	1	0.047	Reject the null
Lives with	0.849	1	0.357	Retain the null

The Kruskal-Wallis results of Teacher Subscale comparisons found no statistically significant differences among groups. Results are notated in Table 19.

Finally, the Kruskal-Wallis H test analysis of the School Subscale showed no significant difference among groups. Table 20 summarizes the findings.

In summary, one statistically significant difference among groups was identified. White and non-White races differed in their perceptions of connectedness on the peer subscale

$\chi^2(1) = 3.951, p = .047$. No other statistically significant differences were found on the composite rating distributions or any of the other subscales. Table 21 summarizes the findings.

Table 19

Kruskal-Wallis H Test: Connectedness to Teachers

Connectedness teachers	Statistic	<i>df</i>	<i>p</i>	Decision
Middle or High School	0.834	1	0.361	Retain the null
Gender	2.402	2	0.301	Retain the null
Race/ethnicity	2.225	1	0.136	Retain the null
Lives with	2.648	1	0.104	Retain the null

Table 20

Kruskal-Wallis H Test: Connectedness to School

Connectedness school	Statistic	<i>df</i>	<i>p</i>	Decision
Middle or High School	1.645	1	0.199	Retain the null
Gender	0.850	2	0.654	Retain the null
Race/ethnicity	0.292	1	0.589	Retain the null
Lives with	0.096	1	0.756	Retain the null

Table 21

Kruskal-Wallis H Test: Statistically Significant Differences Between Groups

Connectedness	Composite	Friends	Peers	Teachers	School
MS/HS	No	No	No	No	No
Gender	No	No	No	No	No
Race/ethnicity	No	No	Yes	No	No
Lives with	No	No	No	No	No

Data Analysis and Results: Qualitative Stage

The explanatory sequential design of this study anticipated that the analysis of the quantitative results on the Hemingway would prompt the need for additional clarification through a qualitative measure. The Kruskal-Wallis H tests revealed that only on the subscale of peers, was there a significant difference between racial groupings. However, the left skew of the distribution data and associated high median scores across all categories prompted additional study to learn why the ratings were as high as they were. The hope was that further study would help uncover what school level factors might be influencing the strong results in the peers, teacher, and school categories.

To accomplish this, in response to the quantitative results, the researcher modified semistructured interview questions to provide additional insight. Further, specific study was needed to answer RQ2 and RQ3 to specifically explore the extent to which the school-level interventions of Crew and Intensives might be influencing the reported levels of connectedness identified on the Hemingway. Analysis and interpretation of the interview result data were completed using traditional deductive coding techniques and assisted with qualitative text analysis features include within the Qualtrics™ platform.

Semistructured Interview

Since interviews are qualitative in nature and intended to further explore quantitative results, they do not require large numbers of participants to yield meaningful data (Creswell, 2015; Guetterman, 2015). Twenty-eight participants completed the interview. Specific groupings being studied during this stage of the study are provided in

the tables below.

Table 22 presents demographic data in terms of grade placement with 11 respondents in middle school and 17 in high school. Table 23 presents data in terms of gender showing that 16 females, 8 males, and 4 individuals who did not disclose gender participated in the interviews. Table 24 presents demographic data in terms of reported race. Only three races are represented in the interview data whereas 8 were identified by the participants of the Hemingway. Table 25 presents data in terms of number of years attending AISU.

Initial Codes

To learn more about RQ1 and to answer RQ2 and RQ3, analysis of semistructured interview data traditional deductive coding techniques was used (Gibbs, 2007; Gilgun,

Table 22

Interview: Grade Placement

Grade placement	<i>n</i>	%
Middle school	11	39.2
High school	17	60.8
Total	28	100

Table 23

Interview: Gender of Participants

Gender	<i>n</i>	%
Female	16	57.1
Male	8	28.6
Prefer not to answer	4	14.3
Total	28	100

Table 24

Interview: Race/Ethnicity

Race/Ethnicity	<i>n</i>	%
White/Caucasian	22	78.6
Other	3	10.7
Hispanic	2	7.1
Asian	1	3.6
Total	28	100

Table 25

Interview: Years Attending AISU

Attendance at AISU	<i>n</i>	%
3 years	18	64.3
2 years	8	28.6
1 year	2	7.1
Total	28	100

2014; Hesse-Biber, 2010). Initial codes representing perceptions of connectedness included terms taken from the literature review completed for this study. Table 26 summarizes the initial codes used to analyze the interview responses.

Interview responses were analyzed according to the initial set of codes to detect words and references that indicated perceptions of connectedness or the lack thereof. Text analysis tools in Qualtrics TextiQ™. Tables 27, 28, and 29 summarize the analysis of interview responses according to the initial set of codes to answer each of the research questions.

Table 26

Initial Codes

Reflect connectedness	Reflect minimal connectedness
Connect	Don't connect
Belong	Isolated
Part of/team	Not included
Relationships	Loner
Interested	Minimal interest
Supported	Not supported
Happy	Unhappy
Fun	Boring
Like/love	Dislike/disinterested
Caring	Minimal care/apathy
Contributing	Disengaged
Respect	Disrespect/ridiculed
Be myself/authentic	Can't be myself/inauthentic
Friends/family	Few friends
Fun/enjoy	Boring/don't like
Accepted/listened to	Not accepted/ignored
Autonomy/choice	Limited choice/forced
Positive/good/healthy	Negative/bad/unhealthy
Respect	Disrespect
Safe	Not safe
Help/meets needs	No help/needs not me
Communication	Poor communication
Good/better	Bad/worse

Table 27

Item Analysis: Most Frequently Used Terms Informing RQ1—AISU

RQ1	Interview question	Most frequently used terms				
AISU	Overall, do you enjoy school? Explain.	Yes	Learn	Feel	Friends	Teachers
AISU	What do you like best about going to AISU?	Teachers	Friends	Choice	Welcome	Care
AISU	Explain how you can be yourself at AISU?	Accepting	Feel	Personality	Individual	Wear
AISU	What do you like least about going to AISU?	Lunch	Feel	Lack trust	Disorganize	Changes

Table 28

Item Analysis: Most Frequently Used Terms Informing RQ2—Crew

RQ2	Interview question	Most frequently used terms				
Crew	What do you like best about your crew?	People	Teacher	Mixed age	Relax	Love
Crew	What do you like least about your crew?	People	Loudness	Topics	Assignment	Disrespect
Crew	Do you think your crew leader would notice if you missed crew?	Yes	Knows me	Everyone	Missing	Roll
Crew	How well do you get along with other people in your crew?	Very well	Good	Friends	Respect	Nice

Table 29

Item Analysis: Most Frequently Used Words Informing RQ3—Intensive

RQ3	Interview question	Most frequently used terms				
Intensives	Overall, do you enjoy AISU intensives?	Yes	Love/like	One focus	Break	Choose
Intensives	Which intensive has been your favorite? Explain	Love/like	Fun	Enjoy	Learned	People
Intensives	Have you had any intensives you didn't like? Explain	No/liked all	Teacher	Boring	Choice	Limited
Intensives	What would you change about intensives? Why?	Nothing	Behavior	Longer	Variety	Crowded
Intensives	Overall, do you have more friends because of intensives? Explain	Met/meet	Yes	No	Talk	Mixed age

Using the initial set of codes, a comparison of the responses from middle and high school-aged students show that 38% of responses from middle school students, and in 69% of responses from high school students included references to connectedness associated with AISU. Additionally, evidence of connectedness associated with Crew were found in 45% of the responses from middle school students, and in 60% of the responses from high school students. Connectedness associated with Intensives was

present in 22% of responses from middle school students and 28% of high school students.

Results are summarized in Table 30. Table 31 shows examples of responses for each of the variables AISU, Crew, and Intensives. Examples of the responses demonstrating connectedness associated with each are included in the table as well.

Though numbers of responses were small for non-Whites, a comparison was made with the response from White students to determine if any similarities or differences existed. Results are summarized in Table 32. Table 33 shows examples of responses for each of the variables AISU, Crew, and Intensives.

Finally, to determine, what, if any, similarities or differences existed between the genders according to grade placement, the initial set of codes was used to compare responses. For example, as part of the investigation of RQ1, a male in middle school submitted the following response to Question 1; “Overall, do you enjoy school? Why or why not? He responded,

Yes, I enjoy school. I get to learn a lot and have a lot of fun while learning. The teachers are all nice and care for me. The assignments really challenge me to strive for success. I really enjoy going here and will continue to go here until I graduate!

Table 30

Initial Codes: Percent of Responses with Evidence of Connectedness by Grade

Grade Level	N	AISU (%)	Crew (%)	Intensives (%)
Middle School	11	38	45	2
High School	17	69	60	28

Table 31

Initial Codes: Example Responses by Grade Placement

Variable	Example responses
AISU	<p>I love this school because they have a lot of school spirit and great staff members who help me learn. It also has gotten me to be more social. I have a lot of friends now (female, middle school)</p> <p>I love having friends so I'm not lonely (female, middle school)</p> <p>You can be yourself at AISU because mostly no one will judge you at AISU. A lot of people are nice at AISU (male, middle school)</p> <p>Yes, I do enjoy school very much. When I walk into AISU it is like walking into a very accepting and positive learning environment. I have good friends that make me a better person, and I hope I do the same for them (male, high school)</p> <p>The last time I honestly enjoyed a school as much as I enjoy this one was in Kindergarten through 2nd grade. I love the teachers, the competency-based grading, and just the general feel of the school (prefer not to answer, high school)</p> <p>I think that AISU creates an atmosphere that manipulates itself to everyone's needs, or at least that is how I have felt about it in the past couple years (however, I loved last year most of all so far) School is where I have friends and family and people that care about me, it's a safe place to make mistakes (female, HS)</p> <p>In most other schools, you will be ostracized by students and staff alike for differentiating opinions, or condescendingly refuted without any real argument and/or proof; it's an unhealthy environment where only the majority opinion is encouraged. In AISU, they actively encourage the expression and beliefs of the individual to cultivate based on who they are, allowing for a more emotionally healthy environment/behavior (female, High School)</p> <p>I do not have to worry about being bullied at all (male, high school)</p> <p>The people (male, high school)</p> <p><i>Limited or no reference to connectedness examples:</i></p> <p>I get bullied by g. w. and a (female, middle school)</p> <p>I'm always stressed (male, high school)</p> <p>The lack of communication .it seemed that communication between teachers and administration was always minimal, and it was the same way between administration and staff (female, high school)</p>

(table continues)

Variable	Example responses
Crew	<p>My crew teacher is nice and funny. Everyone in my crew is like sort of connected like a string (male, middle school)</p> <p>I like that we always stick together and we always listen to each other mostly and everyone in there is a different age, so we are all role models to everyone and the teacher is really nice and comedian (female, middle school)</p> <p>Our crew is a perfect place to relax, talk, and be a part of a group of people I wouldn't normally associate with. I learn about people and say hi to kids I wouldn't normally know, and I also get to take a small break in a classroom setting from something with pressure and assignments (female, high school).</p> <p>Our crew gets along like a family reunion. We all secretly love each other, but we also love to make fun of each other and laugh a lot. I get along really well with everyone, Andy has created that atmosphere. It's an (almost, there are good-humored jokes) zero judgment zone. I think our conversations make our crew unique, and I miss the people that leave (female, high school)</p> <p>I like my crew because we all know each other and even though most of us don't hang out with each other outside of class we still know that we respect each other and have someone to talk to (prefer not to answer, high school)</p> <p>I have had the same crew for 2 years and I like it because it's a group of people who you would never guess to want to talk to each other, but they all do and we all get along great (male, high school)</p> <p><i>Minimal or no reference to connectedness examples:</i></p> <p>I don't really talk to them (prefer not to answer, high school)</p> <p>Most of my crew I don't get along with (female, middle school)</p> <p>Crew takes up time better spent working on assignments (female, high school)</p> <p>Some are judgmental about everyone (male, high school)</p>
Intensives	<p>Yes, [I like intensives] because I meet new people I have so many friends because I talked to the kids whom get made fun of (female, middle school).</p> <p>The people I meet in intensives are just acquaintances most of the time. I do get to know them a little bit though (male, middle school)</p> <p>I do have more friends because of intensives. During intensives, I was able to learn about things that I was passionate about, and everybody had that in common. Everybody chose the intensives they chose because they were passionate or curious about the same thing. This brought us together (female, high school)</p>

(table continues)

Variable	Example responses
	Yes [I do have more friends] because you work together and still make friends in the process (male, high school)
	I enjoyed the Hero's Journey [Intensive] because we learned to play D&D and the teacher, David F., was amazing, he even made this quiet kid who never talked laugh out loud. It was awesome (prefer not to answer, high school)
	I do [have more friends because of intensives]. I made friends with a kid in my first intensive, another three in my next, and another in my third (prefer not to answer, high school)
	<i>Minimal or no reference to connectedness examples:</i>
	My intensive with T. G. I didn't deeply dislike it, but at the end of the day it felt like a stressful waste of time (female, high school)
	I would change the variety of options, I feel like there are the same options every time and we don't get much of an option (female, high school)
	My latest intensive was really boring because the teacher structured it as a normal class (prefer not to answer, high school)
	I had one intensive I didn't like. This was reduce, reuse, and recycle. I didn't like it because it had crocheting (I'm not a fan of art), which is why I switched out of it (male, middle school)

Table 312

Initial Codes: Percent of Responses with Evidence of Connectedness by Race

Grade Level	N	AISU (%)	Crew (%)	Intensives (%)
Non-White	6	63	71	46
White	22	65	83	41

Table 33

Initial Codes: Example Responses by Race

Variable	Example responses
AISU	<p>Overall, I personally do enjoy school, the reason why is because in this environment everyone is accepting no matter how you look or where you come from. It is very accepting of your ideas as an individual and my school also listens to what the students have to say (non-White).</p> <p>I love this school because they have a lot of school spirit and great staff members who help me learn. It also has gotten me to be more social. I have a lot of friends now (non-White)</p> <p>Overall, I like school. I feel safe and free to learn and express my feelings at school. I am greatly supported and encouraged by my peers in my learning, which motivates me to do well academically and to be self-reliant. At AISU I am not only learning academic skills, but also social skills (White)</p> <p>Yes, this is my favorite school I have gone to. The teachers are amazing and students who go here really care about their future. Teacher's genuinely care about you and want you to succeed (White)</p> <p>You walk into AISU and it's like walking into a whole different world. You walk in and it doesn't even remind you of school an everyone knows that we have our own problems and we deal with things differently. But one thing is for sure and it's that there is always somebody to talk to about anything (White)</p> <p>The environment is open and accepting, we have a GSA and most of the teachers and students are very accepting (White)</p> <p><i>Minimal or no reference to connectedness examples:</i></p> <p>I dislike the way on Fridays high schoolers have to wait to eat lunch unlike every other grade in the school (non-White)</p> <p>The teachers don't always explain the work clearly to my understanding or listen to the students (non-White)</p> <p>I like how we get computers to rent (White)</p> <p>Overall, yes. It is a much more functional education system than any I have experience (although my previous experience was only of standard public schools). It is not a perfect school, but it has a lot to offer both on and offline; and can offer education of a higher standard in preferential terms (White)</p> <p>Yes, I like school. I like the ability to go ahead (White)</p>

(table continues)

Variable	Example responses
Crew	<p>I get along well with other kids with my crew, we all have respect for each other (non-White)</p> <p>I think my crew teacher will notice me if I missed crew because she knows us all and always says hi in the hall and is just great (non-White)</p> <p>Yes, because she always knows when everyone is gone, because she actually pays attention to every single student in the room (non-White)</p> <p>Yes, because we got a chance to meet different grades and we got to join together to do something fun (non-White)</p> <p>...my crew leader wants us all involved in crew he treats us like close friends (White)</p> <p>Yes definitely, he knows all of us by name, makes a personal connection with us, always takes the role. Crew 22 for LIFE (White)</p> <p>I like my teacher and the people in my crew. We learn how to be accountable and it's a very safe space to talk (White)</p> <p><i>Minimal or no reference to connectedness:</i></p> <p>I don't think he would because people tend to ignore me (non-White)</p> <p>I really don't like some people. For example, there is this girl that is named J., and for some reason I think she is just annoying and I really despise her for some reason (non-White)</p> <p>My crew this year, we don't flow that well together (White)</p> <p>Some of the people are really disruptive, immature, and disrespectful. (White)</p>
Intensives	<p>I like my astronomy intensive because it has been the only intensive that I have been in and I had lots of friends in that intensive (non-White)</p> <p>S, because we got to learn math through dance and high schoolers helped with the intensive and we got to perform in front of lots of people and it was just so FUN and AWESOME (non-White)</p> <p>Yes, because it's not only a break from class but it's a chance to meet new people (White)</p> <p>I LOVE AISU intensives! Intensive are a fun time to get to study something I am passionate about, with other people who are also passionate about it (White)</p> <p>Yes, intensives are great! I feel like they enable us to follow our passion for two weeks, and I enjoy focusing on one subject. I've enjoyed every intensive I've been in (White)</p> <p>When I am in my intensive I find waking up a little more bearable, because I know that I am going somewhere I want to go (White)</p>

(table continues)

Variable	Example responses
	<i>Minimal or no reference to connectedness:</i>
	I didn't really like [one intensive], because Mrs. B. was very mean and the only things she said were in a yelling voice and they never listened to us and they always were freaking out on us for the littlest of things (non-White)
	That there would be less students in each because it is crowded and its get annoying at some points and we don't always get along when there is so much more people (non-White)
	No. I think Intensives are a waste of time, and we should just get 2 weeks of break (non-White)
	I think we had to walk too much in Disc Golf, and it was really boring when we had to stay at the school (non-White)

His answer included several terms and phrases representing the initial set of codes such as “fun,” “teachers are all nice,” and “care for me.” Similarly, a middle school-aged female responded to the question stating,

I love this school because they have a lot of school spirit and great staff members who help me learn. It also has gotten me to be more social. I have a lot of friends now.

Her response included the codes “love,” “friends,” “great staff” and “help.” Not that both the male and female middle school-aged students gave responses that mentioned relationships with adults who treat them well. In another response, a high school-aged female gave a much longer response to the question. She said:

I do enjoy school, and I enjoy getting up and going every day. I get to start my day with an incredible ballroom team, which teaches me discipline, and then I get to start really living life. Our school is a place for me to learn how to communicate and make relationships. I find myself missing it when I'm not there, and I love the fact that my teachers know and care about me. I know it sounds cliché, but I have developed a really good relationship with all of them, all in their own ways. School is where I live life, and struggle, and win and fail. I think that AISU creates an atmosphere that manipulates itself to everyone's needs, or at least that is how I have felt about it in the past couple years (however, I loved last year most of all so far) School is where I have friends and family and people that care about me, it's a safe place to make mistakes.

Her response includes many of the initial codes “know,” “care,” “felt,” “safe,” “team,” “needs,” “friends,” “family.” The words “love” and “relationship” are used twice.

A much shorter response was given by a high school-aged male that also included “friend,” in addition to the codes of “accepting,” “positive,” and “better.” In his answer he stated:

Yes, I do enjoy school very much. When I walk into AISU it is like walking into a very accepting and positive learning environment. I have good friends that make me a better person, and I hope I do the same for them.

The last part of this example is a response from a high school student who did not provide a gender. The response included initial codes “accepting” used twice, “listens,” and phrases that denote “be myself/authentic.”

Overall, I personally do enjoy school, the reason why is because in this environment everyone is accepting no matter how you look or where you come from. It is very accepting of your ideas as an individual and my school also listens to what the students have to say.

Results showed that 53% of the responses of middle-school-aged females and 30% of middle-school-aged males included references to connectedness associated with AISU as school. Seventy-one percent of the responses of high-school-aged females and 67% of responses from high-school-aged males included references to connectedness to AISU. There were no middle school students who did not reveal a gender, but for high school-aged students who did not state a gender, 70% of their responses included references to connectedness to AISU.

Analysis of perceptions of connectedness associated with Crew was evident in in 44% of the interview responses of females and 50% of males in middle school. For high

school students, 71% of the responses of females and 53% of the responses of males included references to connectedness associated with Crew. Fifty percent of the responses of high school students who did not reveal a gender included references to connectedness associated with Crew.

With respect to perceptions of connectedness associated with participation in Intensives, 27% of the responses from middle-school-aged females included evidence of connectedness associated with Intensives. None of the responses from middle-school-aged males included evidence of connectedness in relation to Intensives. Twenty-six responses from high-school-aged females included references to connectedness. The responses of high-school-aged males included evidence of connectedness 33% of the time. Finally, 25% of the responses of High school students who did not reveal a gender included references to connectedness associated with Intensives. Results of the additional analyses are included in Table 34.

Table 324

Initial Codes: Percent of Responses with Evidence of Connectedness by Gender and Grade

Gender – Grade	AISU (%)	Crew (%)	Intensives (%)
Female – middle school	53	44	27
Males – middle school	30	50	0
Female – high school	71	71	26
Males – high school	67	53	33
Prefer not to answer – middle school	-	-	-
Prefer not to answer – high school	70	50	25

Refined Codes

Based on findings from the initial coding work, a refined set of codes was developed. This was done by combining and collapsing the large set of code into a manageable set of codes that represented the most essential elements needed to answer the research questions. The revised codes were categorized by major themes (Gilgun, 2014; Hesse-Biber, 2010).

New prioritized codes included the evidence of connectedness categories related to (a) AISU as a school (b) relationships (c) social environment (d) learning environment (e) autonomy (f) achievement, and (g) individual experience. The code “AISU as a school” refers to responses that reference the school itself. The code “Relationships” denoted any references to friendships, rapport with caring adults, interpersonal associations, etc. The “social environment” code represented the social aspects of the school environment inside and outside of classrooms. The code “learning environment” included references to the academic experiences such as classroom environments, curricular models, instructional delivery methods, and academic progress opportunities available. The code “autonomy” denoted references to student choice what they learned, when they learned, how they learned, and with whom they learned. The code “achievement” represented references to academic progress, level of mastery, grade attainment, etc. Finally, “individual experience” was used to identify responses where students described specific personal experiences they were having at school and associated with the school environment.

The revised codes were used to examine the entire body of interview responses.

Grade placement, gender, and race comparisons were not made at this level. Given the nature of the revised codes as they functioned to answer each of the research questions, comparisons at this level of analysis would not have yielded meaningful data.

Next, analysis of all of the interview responses was completed according to the revised codes. Altogether, within all of the interview responses, there were 734 references to connectedness. The analysis of each of the revised code category resulted in 59 references to connectedness associated with AISU as a school, 167 associated with relationships, 123 associated with social environment, 129 associated with learning environment, 64 associated to autonomy, 63 associated with achievement, and 129 associated with individual experience.

These findings showed that perceptions of connectedness related to AISU as a School were present in 8.0 % of the total interview responses. Connectedness associated with relationships was found in 22.8% of responses. References to connectedness associated with the social environment were present in 16.8% of responses. Connectedness associated with learning environment was also present in 17.6% of responses. Connectedness associated with autonomy was identified in 8.7% of responses followed by 8.5% related to achievement. Finally, connectedness associated with specific individual experiences was present in 17.6% of responses. The results are summarized in Table 35.

In the context of RQ1 regarding AISU as a school, the analysis of interview responses according to the revised set of codes resulted in the findings summarized in Table 36. The category of relationships was the clearly the highest with 24.8% of the references to connectedness. Social environment was next with 20.3% and learning

Table 335

Revised Codes: References to Connectedness—All Responses

Revised codes	All responses	%
AISU as a school	59	8.0
Relationships	167	22.8
Social environment	123	16.8
Learning environment	129	17.6
Autonomy	64	8.7
Achievement	63	8.5
Individual experience	129	17.6
Total	734	100

Table 346

Revised Codes: References to Connectedness, RQ1—AISU

Revised codes	AISU	%
AISU as a school	58	14.2
Relationships	101	24.8
Social environment	83	20.3
Learning environment	56	13.7
Autonomy	34	8.3
Achievement	28	6.9
Individual experience	48	11.8
Total	408	100

environment with 13.7%. Individual experience followed with 11.8. Autonomy and achievement accounted for 8.3% and 6.9% of the references to connectedness, respectively.

In the context of RQ2 regarding Crew, the analysis of interview responses

according to the revised set of codes resulted in 118 references to connectedness associated with Crew. The results are summarized in Table 37. The category of relationship had the highest percentage with 24.6% followed by individual experience, which accounted for 23.7% of the references to connectedness. Not far behind was learning environment with 22.9% of the references. Social environment accounted for 20.3% of the references to connectedness. Autonomy, achievement, and AISU as a school accounted for 5%, 3%, and 1%, respectively.

Table 357

Revised Codes: References to Connectedness, RQ2—Crew

Revised codes	Crew	%
AISU as a school	1	1
Relationships	29	24.6
Social environment	24	20.3
Learning environment	27	22.9
Autonomy	3	3
Achievement	6	5
Individual experience	28	23.7
Total	118	100

In the context of RQ3 concerning Intensives, the results of the revised code showed that connectedness associated individual experiences was most prominent with 25.5%. Connectedness associated with the learning environment followed with 22.1%, relationships was next with 17.8% of the responses. Achievement and autonomy accounted for 13.9 and 12.9 of the references to connectedness, respectively. These findings are summarized in Table 38.

Table 368

Revised Codes: References to Connectedness, RQ3—Intensives

Revised codes	Intensives	%
AISU as a school	0	0
Relationships	37	17.8
Social environment	16	7.8
Learning environment	46	22.1
Autonomy	27	12.9
Achievement	29	13.9
Individual experience	53	25.5
Total	208	100

The inherent nature of the revised code categories is important to consider when interpreting the tables below. Due to the elements of AISU’s educational model, some of the revised codes tend to be associated with one research question more than another. For example, the revised code of connectedness associated with autonomy was more likely to be found in responses related to Intensives or AISU as a school. Few, if any references to connectedness associated with autonomy would be expected in responses to questions about Crew. The reason is that students are expected to choose the Intensives in which they participate. The core element of the autonomy revised code is the ability to choose. Students are not allowed to choose the Crew to which they are assigned. Further, Intensives are part of the AISU school educational model that is experienced by all students. This means that all students are required to choose the Intensive in which they participate. As a result, it is conceivable that participants might associate autonomy with AISU as a school.

Similarly, it would be expected that the revised code of connectedness associated with achievement would be found more often in responses to questions about Intensives. Students receive academic letter grades in their Intensives; whereas, they only receive participation ratings for Crew. Functionally, students can achieve good grades or accelerate their progress in Intensives, but they cannot in Crew.

Therefore, the results illuminate the perceptions of connectedness associated with revised codes in context to the AISU environment examined by this study. Care should be taken to refrain from inferring that the numbers of responses demonstrate more or less connectedness for each of the research questions about AISU, Crew, and Intensives.

Summary

In adherence to the Explanatory Sequential design (Creswell, 2015) a quantitative measure was administered first, then a qualitative measure was used to learn more about the quantitative results. To answer RQ1, the quantitative Hemingway Measure of Adolescent Connectedness Short Form was given. It was followed by a qualitative semistructured interview to more fully explain the quantitative results for RQ1 and to answer RQ2 and RQ3.

The AISU administration selected secondary students from three middle school and three high school Crews to participate in this study. All individuals who were present in their Crew class on the appointed day and had parent permission, were given the survey. The participants included 134 middle and high school students.

The Hemingway used a 5-point Likert-type scale to measure a series of 57 questions. Results included a composite measure of connectedness and several subscales.

The subscales consisted of five positively worded questions with one negatively worded question. To derive total rating scores, the ratings were quantified commensurate with their Likert-type rating, 1 through 5, and summed. Negatively worded items were reverse scored prior to summing. For this study, the sums were calculated for all of the items on the Hemingway. This score is referred to as “composite” or “overall” score. Only the subscales of friends, peers, teachers, and school were summed for analysis in this study. The other subscales available on the Hemingway were not used for this investigation.

Since the Hemingway data was ordinal, medians were identified for analysis of the composite and subscales ratings. Frequencies were calculated as well. The sample was of convenience and results showed that the distributions were not normal, so it was necessary to use a non-parametric test to see if there were differences among the groups. Suitable for comparing more than one group, the Kruskal-Wallis H test for non-parametric data was used to determine what, if any, differences existed between groups.

Completion of the Kruskal-Wallis H test was the last phase of the quantitative analysis stage of this study. With the exception of one comparison group, the Kruskal-Wallis H tests showed no significant differences between groups for overall connectedness. The only statistically significant finding was the difference between White and non-White participants on reported perceptions of connectedness associated with the peer’s subscale.

The other results from analysis of the quantitative data showed that the Hemingway Subscales of Friends had the highest levels of perceived connectedness. This was followed by the teacher’s subscale, which consistently earned the high ratings in all of the demographic category analyses. The school subscale ratings were lower than

teachers and higher than the peer's subscale in all cases. These results informed the development and revisions to questions on the semistructured interview.

To complete the qualitative stage of the analysis, the semistructured interview responses were evaluated through the use traditional deductive coding techniques. An initial set of codes was derived from the review of literature and the connectedness terms used in the Hemingway measure itself. This initial set of codes was utilized to examine all interview questions where participants were asked open ended questions about their experiences at AISU, in Crew, and in Intensives. Further analysis, using initial codes, was done on the interview results according to the demographic categories of grade placement, gender, and race. Family living arrangements were not analyzed during this stage of the study.

Since the intent of the qualitative measure was to learn more about the quantitative results, all interview responses used in the qualitative stage of the study were examined for evidence of connectedness to in alignment with the Hemingway results for the subscales of friends and teachers, followed by school and then peers. Numerous references to connectedness related to friends and teachers were found among responses to all three sets of questions asking about AISU as a school, Crew, and Intensives.

An analysis using the initial set of codes showed that the term "friend" appeared as one of the top five most frequently used terms in interview questions asking about AISU and Crew. The word "friend" was not one of the most frequently used terms on the questions about Intensives. However, the term "people" was one of the five most frequently used terms on the questions about Intensives. It was also found among the top five words in questions about Crew. It is plausible that the term "friend" could be

included in group referred to as “people” along with adults and other individuals such as Peers. This should be considered as results are interpreted.

Similarly, the quantitative results were supported by the qualitative interview findings related to connectedness to Teacher. The analysis showed that “teacher” appeared as one of the top five most frequently used words across all three question categories of AISU, Crew, and Intensives. Here also, it is possible that the term “people,” found in questions about Crew and Intensives, could include “teachers,” though not expressly identified as such.

None of the question sets analyzed with the initial set of codes, included words that denoted “school” or “peers” among the top five most frequently used words. Some of the features found in a “school,” such as lunch, assignments, and taking roll appeared frequently in the interview responses. Specific reference to “peers” was not present in the top five most frequently used words in any of the question sets.

Although the text analysis from the initial set of codes showed no specific references to “peers” in the five most frequently used word results, the only statistically significant finding on the Kruskal-Wallis H test was the difference in responses between White and non-White participants on perceptions of connectedness associated with “peers.” This finding suggested that additional study of the “peers” construct was prudent within the scope of this study.

To more fully understand this result associated with “peers,” interview responses were compared by race using the initial set of codes. Both Crew and Intensives are settings where students are primarily surrounded by peers assigned to that class. Therefore, it is reasonable to infer that many of the students in referenced in Crew and

Intensives represent peers assigned to the class rather than friends. The questions about AISU as a school were not included in this further examination into the “peers” differences because the school community included teachers, staff, friends, parents, and other individuals besides peers. It would be ineffective to attempt to make any inferences about peers, alone, from a combined school community environment.

Additional analysis included careful review of the results the interview questions about Crew and the Kruskal-Wallis H test findings with regard to connectedness to peers. From this examination, it was discovered that differences existed between the levels of connectedness reported on interview questions by non-White individuals compared to their White counterparts. Results showed that non-White individuals reported feeling connected in 71% of their responses associated with Crew. This result, while demonstrating relatively high levels of connectedness in the context of Crew, was lower than the 83% of responses given by White students to the same questions. Additionally, differences, though smaller, were also found in the levels of connectedness associated with Intensives. Connectedness was evident in 46% of the responses of non-White individuals compared to 41% of responses by White students.

With regard to disparity between middle and high school student responses, notable findings showed differences between the middle school and high school students. On the Hemingway, medians of the responses of middle and high school students were somewhat similar. The median for the composite ratings of middle school students was 209 and the median for high school students was 206. In contrast, on interview questions about AISU, only 38% of the responses from middle-school-aged students contained references to connectedness while 69% of the high school level responses did.

Middle- and high-school-aged student responses to interview questions about Crew also showed differences that seemed at odds with the Hemingway results. Only 45% of the responses from middle-school-aged students referred to connectedness associated with Crew, compared to 60% of those from high school students.

Responses to questions about Intensives resulted in smaller differences between middle school and high school students. Fewer references to connectedness were found in response from both groups. Only 22% of middle school students referenced connectedness associated with Intensives. High school students referenced connectedness related with Intensives in 28% of their responses.

These differences between the interview responses of middle school and high school students prompted a deeper level of examination. Additional comparisons were made by grade placement and by gender. Results of these comparisons showed that responses to questions about AISU showed connectedness present in 53% of the answers of middle-school-aged females, which was much higher than 30% reported by middle-school-aged males. In part, this result may be attributed to developmental differences found between males and females in middle school (Armstrong, 2006). Additionally, the number of middle-school-aged males who responded to the interview questions were low, which may have artificially depressed the results. Care should be taken when interpreting these findings.

Responses to interview questions about AISU were higher overall for high school students. This result could be influenced in part by the fact that most of the respondents reported being students at AISU for 2 to 3 years. The answers from high school females and males were much more similar than those of female and male middle school students.

High-school-aged females reported feeling connected to AISU in 71% of their answers. High-school-aged males answered similarly, with 67% including references to connectedness.

Additionally, at the high school level, interview responses were provided by several individuals who chose not to disclose their gender. Remarkably, feeling connected to AISU was evident in 70% of these responses. Part of what makes this result compelling is that while these individuals did not expressly disclose a gender in the demographic information, within their responses, they did disclose gender identity as being something other than their biological sex. Presently, much of the information that is available about gender identity issues in schools tends to suggest that those individuals face isolation, loneliness, ridicule, and limited support from others (Kosciw, Greytak, Palmer, & Boesen, 2014). However, the findings of this study do not appear to support those assumptions, for the school environment at AISU, within the limited scope of this investigation.

Some differences were also found in the levels of connectedness reported in answers to questions about Crew. Results showed that 44% of the responses of middle-school-aged females and 50% for middle-school-aged males included evidence of connectedness. However, due to the small number of middle school male respondents, care should be taken in interpreting or making inferences from these results. When it came to perceptions of connectedness associated with Crew, larger differences were more evident between high-school-aged females, males, and those who did not reveal a gender. High-school-aged females referred to connectedness in 71% of their responses, while only 53% of the responses of males did. Only 50% of the responses of those who did not

provide a gender included references to connectedness associated with Crew.

Lastly, levels of connectedness associated with Intensives were lower than those with AISU as a school and with Crew. Middle-school-aged females reported feeling connected in 27% of their responses. None of the middle school males reported connectedness with Intensives. Only 26% of high-school-aged females included references to connectedness in their answers compared with 33% of high-school-aged males and 25% of those who did not give a gender.

Overall, to answer RQ1, the results of both the quantitative and qualitative measures suggest secondary students at AISU report high levels of connectedness. Relationships to friends and teachers appear to be more frequently associated to feelings of connectedness than affiliation with the school or interactions with peers. Another notable finding was that, in addition to having lower ratings than friends and teachers, connectedness to peers was always lower than connectedness to school.

The demographic categories of grade placement, gender, and race appeared to influence the perceptions of connectedness in both the quantitative and qualitative measures. The degree to which culture influences the response differences between non-White students and White individuals was not investigated in this study, but the results do demonstrate the need for additional research.

Based on findings from the initial coding work, a refined set of codes was developed. This was done by combining and collapsing the large set of code into a manageable set of codes that represented the most essential elements needed to answer the research questions. The revised codes were categorized by major themes (Gilgun, 2014; Hesse-Biber, 2010).

New prioritized codes included the evidence of connectedness categories related to (a) AISU as a school (b) Relationships (c) Social Environment (d) Learning Environment (e) Autonomy (f) Achievement, and (g) Individual Experience. The results of the follow-up analyses using the revised codes showed that, in total, 22.8% of all interview responses included references to connectedness associated with Relationships. Most often, the references to “relationships” involved specific mention of friends or teachers. Learning environment and individual experience were tied at 17.6% each for the second highest ranked items.

Data organized in alignment with each research question showed that, for RQ1 AISU, the category of relationship had the highest percentage with 24.8%. It was followed by social environment, which accounted for 20.3% of the references to connectedness. The third highest percentage was learning environment, which was attributed for only 13.7% of the references to connectedness.

For questions related to RQ2 Crew, connectedness was most often associated with Relationships as found in 24.6% of the responses. Individual experience was next with 23.7% of the responses followed by learning environment with 22.9% of responses. Connectedness attributed to social environment appeared in 20.3% of responses.

In regard to RQ3 Intensives, individual experience was associated with connectedness most often with 25.5% of responses. Learning environment was next with 22.1% of responses associating it with connectedness. Unlike the results for all responses, AISU, and Crew, the relationship category accounted for only 17.8% of the references to connectedness.

CHAPTER V

DISCUSSION

The data analysis and results of the quantitative and qualitative elements of this explanatory sequential study were described in Chapter IV. The purpose of Chapter V is to review and discuss the findings and implications, the limitations of the study, recommendations for further research, and the conclusion.

Summary of the Study

This study was intended to fulfill the request of the AISU administration to learn the extent to which they were reaching the goals of AISU charter with respect to Tenets of Democracy with a focus on connectedness. Specifically, this study examined the AISU school environment and the school-level interventions of Crew and Intensives. The intent was to determine the extent to which secondary students report perceptions of connectedness associated with AISU as a school, Crew, and Intensives. This research contributes to the body of knowledge regarding school-level factors (Marzano, 2003) available to educational leaders, parents, and students.

The first stage of this explanatory sequential (Creswell, 2015) study involved a quantitative measure that was administered and analyzed. The Hemingway Measure of Adolescent Connectedness was used as the quantitative measure to answer RQ1. The results of the Hemingway were utilized to inform the qualitative second stage of the study, which further examined the results of quantitative measure. A researcher constructed semistructured interview was the instrument used for this phase of the study

to illuminate the results relevant to RQ1 and to answer RQ2 and RQ3.

RQ1: To what extent do AISU secondary students report perceptions of connectedness?

Answering RQ1 was the focus of the quantitative stage of this Explanatory Sequential study. Results provided insight as to the extent to which AISU secondary students report perceptions of connectedness overall and on five subscales of interest. The Hemingway measures connectedness through what the author conceptualized as Worlds of Connection: Family, Friends, School, Peers, and Self (Karcher, 2011). The sample sizes were large enough in this stage of the study that inferences made from the data are meaningful, and some generalizations can be suggested.

This study functionally examined the “Worlds of Connection” for the participants through the analysis of the composite score. Results showed that overall, participants reported positive feelings of connectedness in 67% of their responses to the Hemingway-Short Form items. Interpreted, this encouraging result means that on two thirds of the time, secondary student participants at AISU reported feeling connected to their “World.”

The narrow focus of perceptions of connectedness associated with school-level factors required a deeper level of investigation. Therefore, the Hemingway Subscales of Friends, Peers, Teachers, and School were examined. Overall, the highest connectedness ratings were earned on the friend’s subscale (Mdn. = 26) followed by the teacher subscale (Mdn. = 25). The connectedness ratings for the peer subscale (Mdn. = 21) were slightly lower than those for the school subscale (Mdn. = 23).

Connectedness to friends appears to be invulnerable to demographic influences measured in this study. However, there are clear differences in perceptions of

connectedness associated with self-selected friends compared to peers who are often imposed upon them in a school environment. This finding supports existing literature demonstrating that managing peer relationships is one of the most challenging and important tasks that adolescents face (Allen & Loeb, 2015 p. 101). It also supports other existing research that differentiates “friend” groups from “peer” groups, and the impacts of those relationships on adolescents (Berndt & Murphy, 2002; Brown & Larson, 2009; Traylor et al., 2016).

Further evidence of differences between connectedness associated with Friends and Peers was found on the Kruskal-Wallis H tests. The only statistically significant differences between respondent groups were found on the peer’s subscale comparing responses from individuals who identified as White and those who identified as non-White. To learn more about this result, the degree to which cultural factors contribute to this finding should be investigated in future research. Some existing literature suggests that connectedness is a basic human need that exists across cultures (Kagitcibasi, 2005). While the need for connectedness is likely common to all, a substantive body of research suggests that there are notable differences in levels of connectedness found among various cultures (Cohen, 2004; Dwairy & Achoui, 2010; Hammack, Richards, Luo, Edlynn, & Roy, 2004). For example, significant differences in levels of connectedness have been found between individualistic cultures and collective ones. Others show substantial variations in levels of connectedness that differ by cultures within various regions of the world.

Another difference worth noting was that connectedness to teachers was

consistently rated higher than connectedness to school. Even though differences were only a few points higher for teachers than for school, it is interesting that on all of the analyzed subscales, connectedness to teachers came out ahead. These findings were amplified in the results of the semistructured interview where mention of teacher was found in the top five most frequently used words in all three question sets. Moreover, when the responses were analyzed according to the revised set of codes, the highest results were relationships where teachers were frequently mentioned by name and as a group. Teachers were also frequently mentioned when students described connectedness within the learning environment and individual experience. References to connectedness to school were primarily found in response to the questions specifically about AISU as a school, as expected.

The findings support the existing literature about the important role of a caring and competent teacher to the social development and success of students (Bandura, 1986; Berry & O'Connor, 2009; Croninger & Lee, 2001; Rimm-Kaufman & Chiu, 2007). Rimm-Kaufman and Sandilos (2010) state that a student who feels a strong personal connection to her teacher talks with her teacher frequently and receives more constructive guidance and praise rather than just criticism from her teacher. The student is likely to trust her teacher more, show more engagement in learning, behave better in class and achieve at higher levels academically. Additionally, positive teacher-student relationships draw students into the process of learning and promote their desire to learn.

The findings in this study also support the works by Croninger and Lee (2001) who found that teacher-based forms of social capital reduced the probability of students

dropping out of school by nearly half. Although teacher-based forms of social capital were generally beneficial for all secondary students studied by Croninger and Lee, those who benefitted most were students who were most at risk of dropping out of high school. They further found that secondary students who came from socially disadvantaged backgrounds and who experienced academic difficulties in the past found guidance and assistance from teachers especially helpful.

Since AISU, as a school, has a higher than typical population of at-risk students, results and existing literature suggest that it would be beneficial to promote an environment where high levels of connectedness are common, especially to foster healthy teacher-based forms of social capital. In general, results appear to suggest that it may be prudent for AISU administrators to continue to cultivate school-level factors that promote connectedness.

RQ2. To what extent does participation in Crew promote perceptions of connectedness among secondary students?

Structured similarly to advisory or homeroom groups, Crew is a school-level intervention at AISU that sets it apart from other schools. Crews consist of groups of 20 to 30 students from multiple grades, led by a teacher or qualified staff member known as a Crew Leader. Students continue with their Crew throughout middle school and high school. It is a characteristic that sets AISU apart from other schools.

The purpose of RQ2 was to study the extent to which Crew influenced perceptions of connectedness among secondary students. High levels of connectedness were found through the Hemingway overall and Subscale results. Semistructured interview questions asked students specifically about their experience in Crew.

Connectedness associated with Crew was higher for high school-aged students than it was for middle school-aged students. When racial demographics were considered, connectedness associated with Crew was present in 83% of the responses of White students, and 71% of the responses of non-White students. Comparisons by gender and by grade placement showed that female high school students had the highest levels of connectedness associated with Crew at 71%, followed by high-school-aged males at 53%.

These findings support existing research on the value of school-level interventions such as Crew (Blum & Libbey, 2004; Cushman, 1990; Jackson & Davis, 2000; Klem & Connell, 2004; McNeely & Falci, 2004, Odden-Heide, 2016). Shulkind and Foote (2009) state that schools that intentionally promote personalization and the development of communities of learners better prepare adolescents for later success as adults. Shulkind and Foote further state that advisories with high levels of connectedness included active efforts to create a healthy community by addressing the way students related to one another. Advisors consciously helped students in their advisories work out issues among themselves, and they talked openly about the importance of treating each other with respect. This assertion is supported by the findings of this research where the revised code of Relationships was found to be associated most often with connectedness overall, for AISU, and for Crew.

The answers to the semistructured interview questions about Crew affirmed the quantitative results of this study. They also affirm the existing research on Crew-like organizations within school systems. As denoted in the school charter, AISU included

Crew as part of its ecosystem from the school's inception, so it has something of an advantage over more traditional public schools that may try to implement it later. For schools that do have an intervention akin to Crew, this research and other existing literature point to a need for intentional relationship building and creating safe social and emotional environments for students within the school environments (Odden-Heide, 2016). Additionally, the social-emotional well-being of students is correlated with their academic success (Shulkind & Foote, 2009). Results of the AISU study showed that a high percentage of students reported that Crew influenced perceptions of connectedness.

RQ3. To what extent does participation in Intensives promote perceptions of connectedness among secondary students?

To determine the extent to which connectedness is associated with Intensives, the researcher included questions about them in the semistructured interview. Results suggest that, generally, students at AISU value Intensives for the unique opportunities they have to choose what they learn, more than for the interactions with people that they produce. For example, high-school-aged females reported connectedness associated with Intensives in only 27% of their responses. Connectedness related to Crew was much higher for high-school females as evidenced in 44% of their responses. Their answers to questions about AISU reference connectedness 53% of the time. None of the high-school-aged males included references to connectedness in their responses to questions about Intensives. Only 25% of the responses from high school students who did not provide a gender included evidence of connectedness associated with Intensives, compared to 70% for questions about AISU, and 50% for questions about Crew for the

same group. Similar differences were found in the responses of the middle school-aged students.

The results of the revised code analysis showed that perceptions of connectedness can be attributed most often, 25.5% of the time, to individual experiences, followed by learning experiences with 22.1%. Only 17.8% of connectedness associated with Intensives can be attributed to relationships. There were some references to relationships with Intensive teachers and with friends who chose the same Intensive, but overall, students seem to appreciate the learning opportunities afforded them in the Intensives more than they do the relationships.

These results support the existing literature on active engagement, sustained focus, and student choice to improve student-learning outcomes (Bertsch, Bryan, Pesta, Wiscott, & McDaniel, 2007; Clark & Mayer, 2008; Rutherford, 2002; Wiggins & McTighe, 2005, 2011). For example, Bertsch et al. states that students should be asked to generate connections, questions, and solutions. One of the strongest findings in the learning sciences is that recall and comprehension are greater if learners are frequently required to produce ideas rather than exclusively receiving information from an instructor or textbook.

Additionally, a meta-analysis of 35 studies on inquiry-based learning, a characteristic of AISU's Intensives, found modest gains in student achievement and significant gains in student's critical-thinking skills (Smith, 1996). Student responses to questions about the Intensives at AISU seem to support this through references to Achievement, Learning Environment, and Autonomy found in the analysis of revised

codes.

With regard to student choice, another important feature of AISU Intensives, a 2008 meta-analysis of more than 40 studies found a strong link between giving students choices and their intrinsic motivation for doing a task, their overall performance on the task, and their willingness to accept challenging tasks (Patall, Cooper, & Robinson, 2008). Intensives provide opportunities for students to choose what they are going to study for 2 weeks, three times per year. Results of this study appeared to support the findings of the 2008 meta-analysis.

In summary, while participants did report moderate levels of connectedness associated with Intensives, results appear to demonstrate that students value their individual experiences when they get to choose what they learn through their choice of intensives. An interesting finding was that several students commented that Intensives are something of an “academic break” yet nearly all of the responses referenced the learning experiences afforded them. This may indicate that some students view academics differently than other learning opportunities. This may be worthy of additional study in future research.

Limitations

This study focused on the degree to which AISU was meeting its goals associated with the Tenets of Democracy as outlined in its charter. Specifically, it looked at the degree to which connectedness was associated with AISU as a school and the school-level interventions of Crew and Intensives hosted there. Therefore, results cannot be

confidently generalized to settings beyond AISU. Care should be taken even when review the results in context of schools with similar school-level interventions. Further, while the number of participants was adequate for this study design and provided informative insights to answer each of the research questions, involving more participants or a randomized sample would have provided more generalizable findings. Additionally, larger numbers of interview participants could have offered more information to examine and would have offered additional insights.

Although nearly equal numbers of females and males participated in the study, White students outnumbered minority students nearly three to one. A participant pool with more racial diversity would have yielded stronger results. Another limitation was that the number of participants who live with both parents was also three times higher than the number of participants who live with only one parent, or someone other than their biological parent. Even though the Kruskal-Wallis H test did not find any significant differences between the both parent and one-parent groups, more equal numbers of participants would have produced more robust results.

Another constraint was that the majority of high school students who participated in the interviews had been at AISU for 3 years. If participants had included more students who had been at AISU for fewer than 3 years, the results may have been somewhat different. This would have provided a more accurate picture of the levels of connectedness experienced by students who had not been at AISU for as long. An analysis of the aggregated effect of years at AISU may have been possible whereas, it was not for this study. Additionally, having more interviews completed by students who

had been at AISU for fewer than 3 years would have allowed comparison of how Crew and Intensives function to promote connectedness in individuals who have not been at AISU as long.

Another limitation was that this study did not examine any Hemingway subscales other than friends, peers, teachers, and school. Therefore, no consideration was given to the extent to which levels of connectedness reported on the Subscales outside of school environments may be related to or influencing students' perceptions of connectedness in general or those associated with school.

Another potential limitation is that responses to the Hemingway and to the semistructured interview questions may have been impacted by the stage of social-emotional development of the adolescent participants. For example, middle school students in sixth grade are just beginning the adolescent phase of physical and social-emotional development while, 12th graders are more advanced and moving toward the final physical and social-emotional phases of adolescence. Additionally, it is often more challenging for a sixth grader than a 12th grader to express complex emotions, of which connectedness may be a part. These developmental realities may have more influence on the results of this study than were able to be determined. Additional study about this would be useful.

Although there were limitations to the generalizability of this study and factors that warrant additional study, results of RQ1 show that secondary students who participated in this study do report high-levels of connectedness overall. Results also showed that high-levels of connectedness are associated with Crew in answer to RQ2.

While not as high, results also showed that participants associate connectedness to Intensives. Relationships seems to be most often associated with connectedness. However, for the Intensives, participants generally place associated connectedness more often on individual experiences and learning opportunities than on relationships.

Recommendation

Findings of this study seem to demonstrate that connectedness is an important feature of the AISU school environment and may be contributing to progress toward the attainment of the goals of the charter with respect to Tenets of Democracy. AISU as a school and Crew, as a school-level intervention, appear to be most often associated with connectedness through relationships and socially safe networks. Weaknesses related to fostering connectedness within the AISU environment and Crew were also identified. The results were substantive enough that the AISU administration may want to consider these findings as they make future plans to make progress toward meeting the goals of their charter.

The power of Intensives to promote higher levels of student engagement, achievement, and critical thinking was evident in the responses to interview questions through frequent references to individual experiences and learning experiences. As social-emotional wellbeing and academic achievement are linked (Armstrong, 2006; Bandura, 1993; Becker & Luthar, 2002; Shulkind & Foote, 2009). AISU administrators may want to consider the findings of this study as they evaluate the design and delivery of Intensives. Since multiple students request more options in Intensives, administrators

might consider increasing the number of Intensives, or offering the same Intensive more than once a year.

Additionally, within the responses to questions about Intensives, several students also mentioned frustration with poorly behaved students and weak teachers. Since individual experience and learning experience were most frequently associated with connectedness in Intensives, this may be an important consideration for AISU administrators as they work to improve progress toward charter goals and achievement of students at AISU.

Recommendations for Further Research

Connectedness is a complex social-emotional construct in the context of any age group. It is particularly complex for children in the adolescent stages of their lives. Additional research to learn more about factors that contribute to or detract from feelings of connectedness for AISU secondary students would be useful. In the context of progress toward goals related to Tenets of Democracy, it may also be helpful investigate a broader set of experiences, circumstances, and relationships that may be influencing the perceptions of connectedness reported by AISU students.

Moreover, additional study into the extent to which physical and social-emotional developmental changes influence feelings of connectedness might be illuminating. Understanding the extent to which developmental stage is related to connectedness would be useful in light of the results of this study and other existing literature. It may also be useful to investigate the degree to which an adolescent's developmental stage influences

his or her ability to express complex feelings like connectedness.

Furthermore, since levels of connectedness have been found to be influenced by culture (Cohen, 2004; Dwairy & Achoui, 2010; Hammack et al., 2004, Mickelson & Kubzansky, 2003), additional research on a more diverse sampling of students at AISU is suggested. If it is possible to find a large enough sample, it would be useful to investigate how culture impacts connectedness among the Hispanic, Asian, bi-racial, Black, Pacific Islander, and Native American populations at AISU.

Lastly, replicating this study on a larger sample size and including randomization would add deeper insights into what aspects of the school environment, school level interventions, and individual student circumstances might be contributing to perceptions of connectedness at AISU. Additionally, study of the other elements of Tenets of Democracy might highlight nuances of that construct that may influence perceptions of connectedness among students at AISU.

Conclusion

The results of this study found that secondary students report high-levels of connectedness to their “World” (Karcher, 2011). Relationships and interactions with friends and teachers are most frequently associated with feelings of connectedness. In the context of this study, peers represent other students assigned to a class or that attend AISU but are not necessarily friends with whom students choose to have relationships. Only moderate-levels of connectedness was associated with peers.

In the context of meeting the goals of this study, it appears that students report

high levels of connectedness associated with AISU as a school, with participation in Crew and Intensives. Both the quantitative and qualitative elements of this study demonstrate that relationships with friends and teachers are paramount in student perceptions of connectedness overall, with AISU as a school and with Crew. Connectedness associated with Intensives is most often reported in the individual experiences and learning opportunities of students. Connectedness associated with relationships is present in responses to questions about Intensives, but not as often associated it is with Crew and AISU.

Interview responses contained compelling stories of how AISU, Crew, and Intensives have enriched and influenced lives in positive ways. There were also responses that provided insight into how experiences at AISU, in Crew, and in Intensives caused students pain and difficulty. Results suggest that there is progress being made toward meeting the charter goals associated with Tenets of Democracy with respect to connectedness. Careful review of the interview responses by AISU Administration and faculty may provide insights for considerations and may be useful to guide refinements.

The results of this study underscore the power of connectedness within a school environment to promote an emotionally and academic safe setting in which students can grow and develop (Markowitz, 2017). Though the results of this study are not necessarily generalizable to other schools or populations, they do offer insight into school-level factors that may prove beneficial and do address progress toward meeting the goals of the AISU charter.

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APPENDICES

Appendix A

Hemingway Measure of Adolescent Connectedness



The Hemingway Measure of Adolescent Connectedness (MAC 5 Adolescent, grades 6-12, Adolescent Version A) M.J. Karcher, Ed. D, Ph.D. University of Texas at San Antonio.
Used with permission.

Are you male or female?

Male

☐

Female

☐

Prefer not to answer

☐

What grade are you in?

6

☐

7

☐

8

☐

9

☐

10

☐

11

☐

12

☐

Please select your race/ethnicity.

White

☐

Black

☐

Hispanic

☐

Asian

☐

American
Indian or
Alaska
Native

☐

Native
Hawaiian or
Pacific
Islander

☐

Bi-racial

☐

Other

☐

Who do you live with?

Mother

☐

Father

☐

Both parents

☐

Other

☐

>>



Please use this survey to tell us about yourself. Read each statement. MARK the circle that best describes how true that statement is for you or how much you agree with it. If a statement is unclear to you, ask for an explanation. If it is still unclear, mark the "?".

[illegible]

Appendix B

Semistructured Interview

Semi-structured Interview

Create an interviewee ID by typing the initials of your first and last name and any 3 numbers in this space.
(example JD435)

Thank you for participating in this research about AISU. Please take the interview seriously. If you successfully complete the interview you will receive a \$5 gift card. Your interview facilitator will give you the gift card when you have finished the interview.

You can complete the interview by filing out this online form.

Please type your answer for each question in the space provided. Answer as honestly as you can. There are no wrong answers. Responses will be anonymous. You can skip any question you are uncomfortable answering.

What grade are you in?

- ☐ 6
- ☐ 7
- ☐ 8
- ☐ 9
- ☐ 10
- ☐ 11
- ☐ 12

Are you a male or female?

- ☐ Male

- ☐ Female
☐ Prefer not to answer

How long have you gone to school at AISU?

- ☐ This is my 1st year.
☐ This is my 2nd year.
☐ This is my 3rd year.

What is your race/ethnicity.

- ☐ White, Caucasian
☐ Black or African American
☐ American Indian or Alaska Native
☐ Asian
☐ Native Hawaiian or Pacific Islander
☐ Hispanic
☐ Other
☐ Prefer not to answer

Overall, do you enjoy school? Why or why not?

How would you describe your relationships with friends inside and outside of school?


What do you like best about going to school at AISU?



What you do like least about going to school at AISU?



Explain how you can "be yourself" at AISU.



What do you like best about your Crew?

NOTE: If you are describing a Crew other than the one you are in this year, please include that in your explanation. For example "The thing I liked most about Crew in 10th grade was..."



What do you like least about your Crew? NOTE: If you are discussing a Crew other than the one you are in this year, please include the year in which you participated in that Crew. For example, "When I was in 9th grade..."

Do you think your Crew leader would notice if you missed Crew? Why or Why not?

How well do you get along with other people in your Crew?

Overall, do you enjoy AISU Intensives? Explain why or why not.

Which Intensive has been your favorite? Explain why.




Have you had any intensives you didn't like? Briefly explain your answer.



What would you change about Intensives? Why?



Overall, do you have more friends than you did because of Intensives? Briefly explain.



Is there anything else you would like to tell us about your experience at as a student, in Crew, and in Intensives at AISU?

Appendix C

Permission to Use Hemingway from Dr. Karcher

Michael Karcher <Michael.Karcher@utsa.edu>
to me ▾

Fri, Feb 26, 2016, 2:35 PM ☆ ↶ ⋮

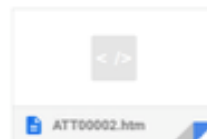
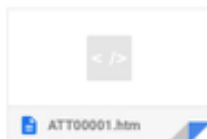
Hi Diane,

Did I get back with you on this? I've been away from home and have fallen behind on emails. I am sorry if I did not reply. Attached is the terms of use and a scoring tool I've used for quick scoring of the scales.

Michael
...

[Message clipped] [View entire message](#)

4 Attachments



Michael Karcher <Michael.Karcher@utsa.edu>
to me ▾

Mon, Feb 29, 2016, 8:30 AM ☆

You bet, Diane,

If you want to chat briefly so I can address any questions you have, let me know when you are available next week and we can try to schedule something.

Michael

Michael J. Karcher, Ed.D., Ph.D.,
Professor of Educational Psychology
University of Texas at San Antonio
501 Cesar Chavez Blvd., Suite DB 4.337
San Antonio, TX 78207
(210) 458-2032; 458-2650 (department)
michael.karcher@utsa.edu

visit websites for information on research

www.schoolconnectedness.com
(e.g., www.ncbi.nlm.nih.gov/pubmed/241133579)

www.schoolbasedmentoring.com
(e.g., <http://www.sambas.org/viewintervention.aspx?id=354>)

Several of Dr. Karcher's publications are available on Amazon.com (Karcher author site).

Appendix D

Communication to Parents Seeking Permission

*** FOR PARENTS:**

AISU Parents,

Utah State University is interested in the AISU school model. Dr. James Dorward and his student researcher are conducting a research study about how connected AISU students feel to their school, peers, and adults.

Your child's Crew has been selected to participate in this study. Parents must give permission for USU to consider and use their child's survey responses in this study. Please click on the applicable link below to review details of the study and respond to the Informed Consent document.

Participation is voluntary. Thanks to all of you who have already given permission.

Link to Parent Informed Consent form in ENGLISH: https://usu.co1.qualtrics.com/jfe/form/SV_1BmWGoFK39FgiYI

ESPAÑOL:

La Universidad Estatal de Utah está interesada en el modelo escolar AISU. El Dr. James Dorward y su investigador estudiantil están llevando a cabo un estudio de investigación sobre cómo se sienten los estudiantes AISU conectados con su escuela, compañeros y adultos.

Antes de que los estudiantes puedan participar en el estudio, los padres deben dar permiso. Haga clic en el enlace correspondiente a continuación para revisar los detalles del estudio y responder al documento de consentimiento informado. La participación es voluntaria. Por favor responda antes del 11 de julio de 2017. Gracias.

Enlace al formulario de consentimiento informado de los padres en ESPAÑOL: https://usu.co1.qualtrics.com/jfe/form/SV_2tbvf7vhWuxlHf

Appendix E

Communication to Students Seeking Assent

*** FOR STUDENTS:**

If you received this email, your parents were notified that we are asking you to take this short survey about your experience at AISU. Their permission is required for us to consider and use your responses as part of the study.

During the scheduled Crew time, you will complete the following steps.

3 EASY STEPS:

Here is what you need to do.

1. READ & SIGN: Youth Assent form before beginning the survey by **CLICKING THIS**

LINK: https://usu.co1.qualtrics.com/jfe/form/SV_6VfxajNsCcdqXLT

2. TAKE SURVEY: Hemingway Measure of Adolescent Connectedness by **CLICKING THIS**

LINK: https://usu.co1.qualtrics.com/jfe/form/SV_3vXF2Izh0DiGBLv

3. VOLUNTEER for INTERVIEW (OPTIONAL) by **CLICKING THIS LINK** https://usu.co1.qualtrics.com/jfe/form/SV_6l2XwvAdqjJslnv

We also invite you to volunteer for an online interview to tell us more. Participating in the interview is not mandatory.

Appendix F

Communication with Crew Leaders

* FOR CREW LEADERS

Utah State University is interested in the AISU school model. Dr. James Dorward and his student researcher are conducting a research study about how connected AISU students feel to their school, peers, and adults.

Your Crew has been selected to participate in this study. All students should participate in this survey during the Crew designated Crew time. However, student participation is not mandatory and students who choose not to participate should remain quiet while others complete the survey. Parents of your students have been notified that this survey is conducted. They must give permission for USU to consider and use their child's survey responses in this study. USU researchers will manage the data and response usage.

Crew leaders need only make time available on the designated day for their students to complete the online survey and read the statement below.

Please read the following statement before students begin the survey.

"Each of you have the opportunity to provide feedback about your experience with peers and adults at AISU and in your community.

Utah State University is conducting a study on this and would like your help in understanding your views.

You have the opportunity to complete a short survey and volunteer to complete short online interview form.

You should have received an email with directions for completing this survey. If you did not receive the email, I can provide you with the links.

The survey should take 5 to 10 minutes to complete."

If students have not received the survey links:

Youth Assent form before beginning the survey by **CLICKING THIS LINK:** https://usu.co1.qualtrics.com/jfe/form/SV_6VfxajNsCcdqXLT


Hemingway Measure of Adolescent Connectedness by **CLICKING THIS LINK:** https://usu.co1.qualtrics.com/jfe/form/SV_3vXF2lzh0DiGBLv

VOLUNTEER for INTERVIEW (OPTIONAL) by **CLICKING THIS LINK** https://usu.co1.qualtrics.com/jfe/form/SV_6l2XwvAdqjJslny

Appendix G

Approval from Institutional Review Boards

[Protis] - Protocol #8350 - Protocol Approved

 Inbox x **noreply@usu.edu**

Tue, May 23, 2017, 5:45 PM



to jim.dorward, me ▾

Student Perceptions of Connectedness at the American International School of Utah - #8350 has been reviewed and approved. You may still view this protocol at any time by clicking here (<https://protis.usu.edu/pi/protocol/irb-8350/>).

[Protis] - Protocol #8350 - Protocol Approved

 Inbox x **noreply@usu.edu**

Wed, Oct 17, 5:18 PM



to jim.dorward, me ▾

Student Perceptions of Connectedness at the American International School of Utah - #8350 has been reviewed and approved. You may still view this protocol at any time by clicking here (<https://protis.usu.edu/pi/protocol/irb-8350/>).

Appendix H

Youth Assent

Youth Assent – Utah State University researchers are doing a research study about how connected AISU students feel to peers, adults, and their surroundings. Research studies help us learn more about people. If you would like to be a part of this research study, you will take a brief online survey. The survey is called the Hemingway Measure of Adolescent Connectedness. It should take you approximately 10 minutes to complete the survey. If you would also like to participate in a short Online interview to help us learn even more, please respond to the questions below.

Before you agree to do these things, we need to tell you a little more. First, when the researchers do Online surveys, you may experience the same kinds of challenges that happen during other surveys and similar activities you do on your computer. You will be asked about how much you agree or disagree with certain statements.

Those who participate in the Online interview will be asked more in-depth questions about their experience at AISU and will have the opportunity to explain those. The interviews are not timed and you will be given adequate time to complete your interview questions. If any question makes you uncomfortable you can choose to skip it.

Please be aware that if the researchers learn that you are engaging in illegal activity, abusing/neglecting/going to engage in self harm/intend to harm another or are being subject to the same, state law requires that the researchers report this behavior/intention to the authorities.

If you participate in this study, there are also some things that **you may like**, such as being able to share your views and ideas about your experience at AISU. Students who complete the Online interview are entered into a drawing for MegaPlex Double Mug package. Everyone who completes the interview will receive a \$5 Maverik gift card.

If this sounds like something you would like to do, we will ask you to acknowledge that you understand what we talked about, and that you do want to participate. **You will do this by marking “Yes” in response to the statement, “I understand the information given to me about this survey and I would like to participate in this research.”**

You do not have to be in this study if you do not want to be. If you decide to stop after you begin the survey simply close the survey and do not complete the survey. If you are selected to participate in the interview and you do not wish to complete the interview after it has started, you can stop. **You don’t want to participate in this research at all, that is okay, too. No one will be upset if you don't want to do this, or change your mind later.**

You can ask any questions you have, now or later. Please contact Steven.Merrell@AISUtah.org

If you would like to be in this study, complete the assent form by responding to the directions below.

Appendix I

Parent Informed Consent - English

IRB Approval Date: 05/23/2017

**STUDENT PERCEPTIONS OF CONNECTEDNESS AT THE AMERICAN
INTERNATIONAL SCHOOL OF UTAH**

Introduction

Your student is invited to participate in a research study conducted by Dr. James Dorward, Professor in the Emma Eccles Jones College of Education and Human Services at Utah State University and a doctoral student researcher. The purpose of this research is to explore the extent to which secondary students at the American International School of Utah report perceptions of connectedness generally and specifically to peers, caring adults, and their school. Of specific interest is perceptions of connectedness with respect to participation in Crew and Intensives.

This form includes detailed information on the research to help you decide whether to allow your student to participate in this study. Please read it carefully and ask any questions you have before you agree to allow participation.

Procedures

Your student's participation will involve taking a short survey called the Hemingway Measure of Adolescent Connectedness by Michael Karcher. The survey will be administered online at a time of their choosing; we will email your student the link if you agree to have them participate. The survey will take approximately 10 minutes to complete. With your permission and if your student agrees to take the survey, the researchers will also invite students to participate in a short interview to learn more about student perceptions of connectedness at AISU. The Interview will take approximately 20 minutes for your student to complete.

To view the Hemingway Measure of Adolescent Connectedness please click on the following link:

https://usu.co1.qualtrics.com/jfe/form/SV_3vXF2lzh0DiGBLv

If the link doesn't work, copy the link and paste it into a browser.

To view the interview questions please click on this link:

https://usu.co1.qualtrics.com/SE/?SID=SV_1SKqsNM4M8ztQh

If the link doesn't work, copy the link and paste it into a browser.

Risks

This is a minimal risk research study. That means that the risks of participating are no more likely or serious than those your student would encounter in everyday activities. The foreseeable risks or discomforts include discomfort if your student has negative feedback to give about AISU. Loss of confidentiality is also a risk in most research activities. In order to minimize those risks and discomforts, the researchers will distribute all survey materials to students through the AISU email system by school personnel known to students. The interviews will be conducted online, to maximize your student's comfort and privacy. If they are concerned for the welfare of other students, teachers, or Crew Leaders we will remind them of the confidentiality practices that are in place and that the results of this study will not affect a student, teacher or Crew Leader's standing. If your student has a bad research-related experience or is injured in any way during study participation, please contact the principal investigator, James Dorward at jim.dorward@usu.edu or Steve Merrell at steven.merrell@aisutah.org, right away.

Benefits

There are no direct benefits to participating in this study. However, studies of adolescent development suggest that students wish to influence their educational environments by providing input and feedback to adult and school leaders (Gambone, Yu, Lewis-Chapman, Sipe, & Lacoe, 2004; Connell, Dishion, & Deater-Deckard, 2006; Gambone & Connell, 2004). This research benefits parents by providing information regarding your child's experience at AISU overall and the degree to which they feel connected to their peers and teachers. Insights gained may benefit future implementations of Crew and/or Intensives at AISU. More broadly, this study may help the researchers learn more about

how school-level interventions such as AISU's Crew and Intensives, may be beneficial to other schools.

Confidentiality

The researchers will make every effort to ensure that the information your student provides as part of this study remains confidential. Your student's identity will not be revealed in any publications, presentations, or reports resulting from this research study. However, it may be possible for someone to recognize your student's particular response to interview questions if your student chooses to participate.

We will collect your student's information through an online survey and an interview. The interview can be completed online. Data will be securely stored in a restricted-access folder in an encrypted, cloud-based storage system and/or in a locked drawer in a restricted-access.

It is unlikely, but possible, that Utah State University may require us to share the information your student gives us from the study to ensure that the research was conducted safely and appropriately. We will only share your student's information if law or policy requires us to do so. If the researchers learn that your student is involved in illegal activity, is abusing/neglecting/going to engage in self harm/intends to harm another, or is being subjected to the same, state law requires that the researchers report this behavior/intention to the authorities. This form will be kept for three years after the study is complete, and then it will be destroyed.

The research team works to ensure confidentiality to the degree permitted by technology. It is possible, although unlikely, that unauthorized individuals could gain access to your student's responses because he/she is responding Online. However, your student's participation in this Online survey involves risks similar to a person's everyday use of the Internet.

Voluntary Participation & Withdrawal

Your student's participation in this research is completely voluntary. If you agree to allow your student to participate now and change your mind later, you may withdraw at any time by contacting the research team. If you choose to withdraw your consent for your child's participation in the interview after we have already collected information about your student, we will destroy the information that was shared. Data collected on the

Hemingway Measure of Adolescent Connectedness is anonymous and participation cannot be withdrawn as the researchers will be unable to discern to whose data is whose.

The researchers or the administration at AISU may choose to terminate your student's participation in this research study if he/she engages in any inappropriate, dishonest, or harmful behavior related to the study.

Compensation

There is no compensation for participation in the Hemingway Measure of Adolescent Connectedness. Students who complete the interview will receive a \$5 Maverik gift card. Not all volunteers for the interview will be selected to participate. Compensation of the \$5 Maverik card will be given at the end of an interview. All interview volunteers will be entered into a drawing for a MegaPlex Double Mug Package. One MegaPlex Package will be awarded. Except in circumstances beyond the control of the participant or researcher, gift cards will not be given for incomplete interviews or failure to participate in the scheduled interview.

Findings & Future Participation

Once the research study is complete, the researchers will share the findings of the study with AISU administration and any others who are interested. If you would like to receive a summary of the results, please email Steve Merrell at steven.merrell@aisutah.org, 801-989-7191.

The Institutional Review Board (IRB) for the protection of human research participants at Utah State University has reviewed and approved this study. If you have questions about the research study itself, please contact the Principal Investigator at 435-797-1471 or jim.dorward@usu.edu or Student Investigator. If you have questions about your rights or your student's rights or would simply like to speak with someone other than the research team about questions or concerns, please contact the IRB Director at (435) 797-0567 or irb@usu.edu.

Dr. James Dorward
Principal Investigator
(435) 797-1471; jim.dorward@usu.edu

AISU email contact:

Steve Merrell steven.merrell@aisutah.org,
 801-989-7191.
steven.merrell@aisutah.org,

By signing below through the link provided, you agree to allow your student to participate in this study. You indicate that you understand the risks and benefits of your student's participation, and that you know what your student will be asked to do. You also agree that you have asked any questions you might have, and are clear on how to stop your student's participation in the study if he/she chooses to do so. Please be sure to retain a copy of this form for your records. Please complete this form by responding as directed below.

PLEASE ADD SIGNATURE AND REQUESTED INFORMATION IN THE FIELDS PROVIDED IN THE ELECTRONIC FORM BELOW.

Default Question Block

Please mark the response indicating whether or not you agree to allow your child to participate in this research study by completing the Hemingway Measure of Adolescent Connectedness.

- ☐ Yes. I am the parent or legal guardian of the child listed below and I agree to allow him/her to participate in this research by completing the Hemingway Measure of Adolescent Connectedness.
- ☐ No. I am the parent or legal guardian of the child listed below and I do not want him/her to participate in this research by participating in the Hemingway Measure of Adolescent Connectedness.

Please mark the response indicating whether or not you agree to allow your child to participate in this research study by participating in the interview, if selected.

- ☐ Yes, I am the parent or legal guardian of the child listed below and I agree to allow him/her to participate in this research study by participating in the interview ,if selected.
- ☐ No, I am the parent or legal guardian of the child listed below and I do not want him/her to participate in the this research by participating in the interview, if selected.

Please type your student's first and last name in the text box.

Please type your first and last name and today's date in the text box.

Appendix J

Parent Informed Consent - Spanish

PERCEPCIONES DE CONECTIVIDAD DE ALUMNOS EN LA ESCUELA INTERNACIONAL AMERICANA DE UTAH

Introducción:

Su estudiante está invitado a participar en un estudio de investigación conducido por el Dr. James Dorward, Profesor del Colegio de Educación y Servicios Humanos Emma Eccles Jones de la Universidad Estatal de Utah quien es también un investigador de doctorado. El propósito de esta investigación es explorar hasta qué punto los estudiantes de secundaria de la Escuela Internacional Americana de Utah reportan percepciones de conectividad en general, específicamente con sus compañeros, adultos a cargo y sus escuelas. De interés específico es la percepción de la conexión con respecto a la participación grupos e Intensivos.

Este formulario incluye información detallada sobre la investigación para ayudarle a decidir si su estudiante es permitido que participe en este estudio. Por favor, lea cuidadosamente y haga cualquier pregunta que tenga antes de que acepte permitir la participación de este.

Procedimientos:

La participación de su estudiante implicará tomar una breve encuesta llamada la Medida de conectividad adolescente Hemingway por Michael Karcher. La encuesta se administrará en línea en el momento de su elección; Enviaremos por correo electrónico a su estudiante el link si usted acuerda hacerlo participar. La encuesta tardará aproximadamente 10 minutos en completarse. Con su permiso y si su estudiante acepta tomar la encuesta, los investigadores también invitarán a los estudiantes a participar en una breve entrevista para aprender más acerca de las percepciones de conectividad de los estudiantes en AISU. La entrevista tardará aproximadamente 20 minutos en completarse.

Para ver la Medida de Conectividad Adolescente Hemingway haga clic en el siguiente enlace:

https://usu.co1.qualtrics.com/jfe/form/SV_3vXF2lzh0DiGBLv

Si el enlace no funciona, copie el enlace y péguelo en un navegador.

Para ver las preguntas de la entrevista, haga clic en este enlace:

https://usu.co1.qualtrics.com/SE/?SID=SV_1SKqsNM4M8ztQh

Si el enlace no funciona, por favor copie el enlace y péguelo en un navegador.

Riesgos:

Este es un estudio de investigación de riesgo mínimo. Eso significa que los riesgos de participar no son más probables o serios que los que su estudiante encontraría en actividades cotidianas. Los riesgos o incomodidades previsibles incluyen incomodidad si su estudiante tiene comentarios negativos sobre la AISU. La pérdida de confidencialidad también es un riesgo en la mayoría de las actividades de investigación. Con el fin de minimizar los riesgos y las molestias, los investigadores distribuirán todos los materiales de la encuesta a los estudiantes a través del sistema de correo electrónico AISU por el personal de la escuela conocida por los estudiantes. Las entrevistas se llevarán a cabo en línea, para maximizar la comodidad y privacidad de su estudiante. Si ellos están preocupados por el bienestar de otros estudiantes, maestros, o Líderes de grupo, les recordamos las prácticas de confidencialidad que se encuentran y que los resultados de este estudio no afectarán a los estudiantes, maestros o líderes de equipo. Si su estudiante tiene una mala experiencia relacionada con la investigación o se lesiona de cualquier manera durante la participación en el estudio, por favor contacte al investigador principal, James Dorward en el correo electrónico jim.dorward@usu.edu o Steve Merrell steven.merrell@aisutah.org, inmediatamente .

Beneficios:

No hay beneficios directos al participar en este estudio. Sin embargo, los estudios del desarrollo adolescente sugieren que los estudiantes influyen en sus ambientes educativos proporcionando la entrada y la regeneración a los líderes de la escuela (Gambone, Yu, Lewis-Chaprr, Sipe, & Lacoe, 2004, Connell, Dishion y Deater Deckard, 2006) Esta investigación beneficia a los padres al proporcionar información sobre la experiencia general de su hijo en la AISU y el grado en el que se sienten conectados con sus compañeros y maestros. Los conocimientos adquiridos pueden beneficiar

futuras implementaciones de grupos y / o Intensivos en AISU. En términos más generales, este estudio puede ayudar a los investigadores a aprender más acerca las intervenciones a nivel escolar, tales como las de grupo y las Intensivas de AISU, pueden ser beneficiosas para otras escuelas.

Confidencialidad:

Los investigadores harán todo lo posible para asegurar que la información que su estudiante proporcione como parte de este estudio permanezca de manera confidencial. La identidad de su estudiante no se revelará en ninguna publicación, presentación o informe resultante de este estudio de investigación. Sin embargo, puede ser posible que alguien reconozca la respuesta particular de su estudiante a las preguntas de la entrevista si su estudiante elige participar.

Recogeremos la información de su estudiante a través de una encuesta en línea y una entrevista. La entrevista se puede completar en línea. Los datos se almacenarán de forma segura en una carpeta de acceso restringido en un sistema de almacenamiento encriptado basado en la nube y / o en un cajón bloqueado en un acceso restringido.

Es poco probable, pero posible, que la Universidad Estatal de Utah pueda requerir que compartamos la información que su estudiante nos da del estudio para asegurar que la investigación fue conducida de manera segura y apropiada. Solo compartiremos la información de su estudiante si la ley o la política nos obliga a hacerlo. Si los investigadores sospechan que su estudiante está involucrado en actividades ilegales, está abusando / descuidando / va a involucrarse en daño propio / intenta dañar a otro, o está siendo sometido a la misma, la ley estatal requiere que los investigadores denuncien este comportamiento / intención las autoridades. Este formulario se mantendrá durante tres años después de que el estudio esté completo, y luego será destruido.

El equipo de investigación trabaja para asegurar la confidencialidad al grado permitido por la tecnología. Es posible, aunque poco probable, que las personas no autorizadas puedan acceder a las respuestas de su estudiante porque él o ella está respondiendo en línea. Sin embargo, la participación de su estudiante en esta encuesta en línea implica riesgos similares al uso cotidiano de una persona de Internet.

Participación voluntaria y retiro

La participación de su estudiante en esta investigación es completamente voluntaria. Si está de acuerdo en permitir que su estudiante participe ahora y cambie de opinión más tarde, este puede retirarse en cualquier momento poniéndose en contacto con el equipo de investigación. Si usted decide retirar su consentimiento para la participación de su hijo en la entrevista después de que ya hayamos recopilado información sobre su estudiante, destruiremos la información que fue compartida. Los datos recopilados sobre la Medida Conectividad Adolescente Hemingway son anónimos y la participación no puede ser retirada ya que los investigadores no podrán discernir a datos pertenecen estos datos.

Los investigadores o la administración de AISU pueden optar por terminar la participación de su estudiante en este estudio de investigación si él o ella se involucra en cualquier comportamiento inadecuado, deshonesto o dañino relacionado con el estudio.

Compensación:

No hay compensación por la participación en la Medida de Conectividad Adolescente Heminway. Los estudiantes que completan la entrevista recibirán una tarjeta de regalo Maverik de \$5. No todos los voluntarios para la entrevista serán seleccionados para participar. La compensación de la tarjeta de \$5 Maverik se dará al final de una entrevista. Todos los voluntarios de la entrevista serán incorporados en un dibujo para un paquete doble de MegaPlex. Se otorgará un paquete MegaPlex. Salvo en circunstancias fuera de control del participante o del investigador, no se entregarán tarjetas de regalo por entrevistas incompletas o por no participar en la entrevista programada.

Resultados y participación futura:

Una vez que el estudio de investigación esté completo, los investigadores compartirán los resultados del estudio con la administración de AISU y cualquier otro que esté interesado. Si desea recibir un resumen de los resultados, por favor envíe un correo electrónico a Steve Merrell a steven.merrell@aisutah.org, 801-989-7191.

La Junta de Revisión Institucional (IRB) para la protección de los participantes en la investigación de la Universidad Estatal de Utah ha revisado y aprobado este estudio. Si tiene preguntas sobre el propio estudio de investigación, comuníquese con el investigador principal al número telefónico 435-797-1471 o con jim.dorward@usu.edu o con el investigador del estudiante. Si tiene preguntas sobre sus derechos o los derechos de sus estudiantes o simplemente desea hablar con alguien que no sea del equipo de investigación sobre preguntas o inquietudes, comuníquese con el Director del IRB al (435) 797-0567 o irb@usu.edu.

Dr. James Dorward
Investigador principal
(435) 797 - 1471; Jim.dorward@usu.edu

Contacto por correo electrónico de AISU:
Steve Merrell steven.merrell@aisutah.org, 801-989-7191

Al firmar a continuación a través del enlace proporcionado, usted acepta permitir que su estudiante participe en este estudio. Usted indica que entiende los riesgos y beneficios de la participación de su estudiante y que sabe lo que se le pedirá a su estudiante. Usted también está de acuerdo en que ha realizado cualquier pregunta que pueda tener, y tiene claro cómo detener la participación de su estudiante en el estudio si él / ella opta por hacerlo. Por favor, asegúrese de conservar una copia de este formulario para sus registros. Por favor complete este formulario respondiendo como se indica a continuación.

POR FAVOR AGREGUE LA FIRMA Y LA INFORMACIÓN SOLICITADA EN LOS CAMPOS DISPONIBLES EN EL FORMULARIO ELECTRÓNICO AQUÍ ABAJO

Default Question Block

Marque la respuesta indicando si está de acuerdo o no en permitir que su hijo / a participe en este estudio de investigación completando la Medida de Conectividad Adolescentes Hemingway

- ☐ Sí. Yo soy el padre o tutor legal del niño que aparece a continuación y estoy de acuerdo en permitirle participar en esta investigación completando la la Medida de Conectividad

Adolescente Hemingway.

- ☐ No. Yo soy el padre o tutor legal del niño que se menciona a continuación y no quiero que él / ella participe en esta investigación la Medida de Conectividad Adolescente Hemingway.

Marque la respuesta indicando si está de acuerdo o no en permitir que su hijo / a participe en este estudio de investigación participando en la entrevista, si es seleccionado.

- ☐ Sí, soy el padre o tutor legal del niño que aparece a continuación y estoy de acuerdo en permitirle participar en este estudio de investigación participando en la entrevista, si es seleccionado.
- ☐ No, soy el padre o tutor legal del niño que aparece a continuación y no quiero que él / ella participe en esta investigación participando en la entrevista, si es seleccionado

Por favor escriba el nombre y apellido de su estudiante en el cuadro de texto

Escriba su nombre y apellido y la fecha de hoy en el cuadro de texto.

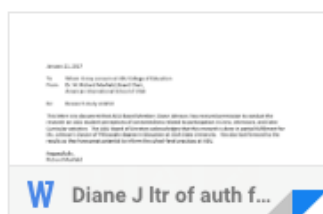
Appendix J

Permission for Study from Board of Directors Chair

richard maxfield <accelered@att.net>
to me ▾

Jan 21, 2017, 1:50 PM

Diane, see attached.



January 21, 2017

To Whom it may concern at USU College of Education
From Dr. M. Richard Maxfield, Board Chair,
American International School of Utah

Re: Research study at AISU

This letter is to document that AISU Board Member, Diane Johnson, has received permission to conduct the research on AISU student perceptions of connectedness related to participation in Crew, Intensives, and Extra-Curricular activities. The AISU Board of Directors acknowledges that this research is done in partial fulfillment for Ms. Johnson's Doctor of Philosophy degree in Education at Utah State University. We also look forward to the results as they have great potential to inform the school-level practices at AISU.

Respectfully,
Richard Maxfield

Appendix L

Instructions Sent to Interview Participants

Diane Longhurst Johnson <dianejohnson435@gmail.com>

Mon, Dec 11, 2017, 7:52 AM



to Nathan, Janae ▾

Hi Nate and Janae,

Below is the list of students who volunteered to respond to the second part of the connectedness research-- the interview (online short-answer type survey)

Please send out the following message to the email addresses I have included.

Thank you so much!

MESSAGE TO SEND OUT:

Thank you for volunteering to participate in the interview portion of the USU research study about student experiences at AISU. Responses need to be completed before Dec 22.

Click this link to complete the interview questions.

https://usu.co1.qualtrics.com/jfe/form/SV_1SKqesNM4M8ztQh

Each person who completes this interview survey by Dec 15 will be entered into a drawing for a Mega-Plex gift pack. All individuals who complete the interview will receive a thank you gift.

CURRICULUM VITA

DIANE LONGHURST JOHNSON

dianejohnson435@gmail.com

(801) 397-0659 cell

<https://www.linkedin.com/in/diane-longhurst-johnson/>

<http://dlonghurstjohnson.com>

EDUCATION

2019	Ph.D.	Utah State University, Education, Curriculum &
2011	Certificate	James Madison University, Higher Ed. Assessment
2002	M.S.	Brigham Young University, Special Ed. Leadership
1991	B.S.	Utah State University, Special Education, Mild/ Mod.

EXPERT LEVEL SPECIALIZED SKILLS

- **Online and distance education expert;** Leading expert in the design and transformation of traditionally designed academic, commercial, trade, and allied health content to competency-based while ensure adherence to quality, accreditation, and licensure standards. Experience building and implementing large scale NWCCU, DEAC, WASC, and MQA approved online competency-based programs. Online teaching, evaluation, and student support expert.
- **Academic and Behavior Supports of At-risk students and Individuals with Disabilities:** Recognized as an expert in academic, behavioral, social, and transition for individuals with complex needs. Extensive formal background and experience with diverse populations of at-risk students of all ages, socio-economic conditions, mental health issues, behavioral concerns, family challenges and learning styles and abilities.
- **Technology and Innovative Education:** International education business development and company advisor for Bottega Technology School. Led them school through their AdvancEd accreditation and ACE recognition. Expert consultant for their on-line, traditional and hybrid programs. Secured contracts in Hong Kong, Singapore, and Malaysia. Expert in scalable education programs. Provided guidance on their teacher education endorsement which is recognized by the Utah State Office of Education.
- **Data Analytics and Decision Making:** Proficient at identifying key metrics and indicators to assess operational efficiency and performance. Use data to inform decisions that lead to successful outcomes.
- **Competency-based Education and Skills Building.** Exceptional ability and extensive

experience in the identification of competencies from any content, operationalizing abstract concepts such that they are observable and measurable, and crafting robust valid assessments. Consultant on design and development of modular learning management systems to facilitate competency-based and hybrid models.

- **Assessment, Accountability, Accreditation:** More than 25 years of experience, most recently, 14 years in higher-education assessment design and development in, academic performance metrics and assessment, item writing, standardized assessment, exam preparation, competency assessment, compliance, security, academic authenticity, professional conduct, and regional and national accreditation efforts. Expert in K-12 and Adult Learner individual, standardized, and performance-based assessment.
- **Personnel Management:** Hired, trained, and managed over 700 university employees where division consistently earned highest productivity and employee satisfaction ranking in numerous company-wide analyses. Additionally, I possess significant experience working full-time, part-time, and contracted staff. Guide and manage implementation of online degree programs for domestic and international educational clients.
- **Training & Professional Development:** Expert level trainer and instructor of individuals at all ages.
Local and national, international speaker, trainer, and consultant.
- **State Authorization:** led efforts to gain authorization or exemption for distance education programs in all 50 states. I have spoken nationally on the topic and working at the state level to support personnel from other universities in state authorization.

PROFESSIONAL EXPERIENCE

2018 - Eduventec

Targeted education and technology solutions for teachers and students in K-12, Higher-ed, and corporate training settings. Competency-based education, assessment, action and formal research, instructional design, micro-credentialing, technology education.

2015 - 2019 New Charter University, Global Heritage Education, LLC President & CEO.

As President & CEO of New Charter University, responsible for strategy and leadership of an innovative, fully competency-based accredited university. Lead all academic operations and regulatory compliance of a fully online university serving students around the world. During period as Chief Academic Officer and interim CEO, led the transition for all courses, records, and other intellectual property from a proprietary Learning Management System and Student Information System to new systems. Responsible to lead all operations to rebuild the university following the asset purchase from previous owners. Responsible to generate partnerships with business, educational and employability entities globally.

2012- 2015 New Charter University, University Now, San Francisco, CA Associate Provost Academic Affairs & Academic Dean

Managed the recruitment, selection, training, evaluation, and professional development of New

Charter University's online faculty; Supervise academic functions, including Full-time and Adjunct Faculty, Registrars, and Student Advisors; Resolve student issues escalated by Course Specialists and Student Advisors; manage the Faculty Advisory Council, including membership, attendance, agenda setting, and meeting management, ensuring that Faculty have a voice in University policy decisions;

Collaborated with Marketing and Business Development departments to select members of employer councils, including the Business Advisory Council, Criminal Justice and Public Policy Advisory Council, Assessment Council; Participate in the recruitment and training of academically qualified Subject Matter Experts to develop courses;

Collaborated with Instructional Designers and editors to review courses developed by Subject Matter Experts, ensuring continuity and quality; Lead student retention initiatives, collaborating with staff in multiple departments; Participate in the development and enforcement of university policies and procedures in conjunction with academic and administrative staff;

Held regular meetings with virtual and onsite faculty to communicate updates to university policies and procedures, and to facilitate discussions around best practices in supporting students; Monitor the quality of online instruction through online classroom visits, review of student satisfaction surveys, and review of course data;

Participated in the regular evaluation of academic programs and the assessment of student and program outcomes; Devise, implement, and test student community building initiatives, collaborating with the User Experience Team and other departments; Perform other duties as assigned.

**2011-2012 Utah State University, Logan, UT
Director of Innovative Programming and Assessment**

Led educational innovation to increase access to, flexibility of, and cost effectiveness in higher education at Utah State University. Direct assessment efforts to measure outcomes and improve efficiencies of all programs in the USU Regional Campus and Distance Education system. Directed transition of traditionally designed education programs to competency-base programs. Network nationally to establish USU as a leader in non-traditional and distance education. Work with Concurrent Enrollment initiatives, CLA replication, organized commencement activities and planned the first annual Innovative Strategies Summit.

**2004-2011 Western Governors University, Salt Lake City, UT
Founding Senior Manager, Performance Evaluation**

Direct operations surrounding the monthly scoring of over 54,000 performance evaluations to ensure validity, reliability, and alignment to degree competencies and objectives. In the last two years, my group scored 1,052,248 performance assessment submissions with well over 2 million during my tenure over the division. Under \$4 million budget for 3 years despite over 40% yearly growth.

Hire, supervise, train, orient, and monitor a cadre of more than 330 employees. The majority are faculty credentialed subject matter experts who we augment their formal academic experience with training in fair assessment practice and WGU evaluation procedures.

Work with HR, Legal Counsel, state Departments of Labor, and Accrediting bodies, to mitigate issues relating to compliance with employee or contractor law, conflict resolution, alleged

infractions, discrimination in any of its forms for employees, contractors, or students with whom my department interacts.

Establish and maintain interoperability and innovation of TaskStream tool suite to document competency on Performance Assessments, meet university turn-around goals and enhance student experience.

Have served as Assessment Department representative on the Academic Standards Committee. Implemented proactive and reactive procedures to detect and hold students accountable for academic honesty. Supervised the investigation and adjudication of more than 600 academic authenticity cases monthly. Provided substantive contributions to improved assessment development techniques to reduce vulnerability to plagiarism, collusion, use of ghostwriters, etc. Prepare for and assist in effort to gain university and college level accreditations and recognition from the Northwest Commission, CHEA, DETC, USDLA, NCATE, CCNE, and CAHIIM. Provide consultation and training at the local and national level on performance assessment design, measurement, rubric development, and data analysis. Consult on design and delivery of assessment, learning resources, and physical Facilities accommodations for students and employees when necessary.

**2001-2004 Utah Personnel Development Center Salt Lake City, UT
Program Specialist, Assessment, Curriculum & Instruction,**

Statewide training of professional educators in the areas of assessment, curriculum and instruction, behavior management, federal and state special education law, standards alignment, individual education planning, collaboration between general and special education, ADA and Section 504.

**2000-2001 Brigham Young University, Provo, UT
University Clinical Supervisor, Curriculum Writer, Graduate Assistant**

Supervision of pre-service teachers in practicum and student teaching settings, data collection and analysis of Peaceable School Behavior Intervention Project; citizenship curriculum writing and implementation; teaching responsibilities.

**1990-2000 Idaho Falls School District #91, Idaho Falls, ID
Special Education Teacher**

Leader in inclusive efforts and support development for students with mild/moderate disabilities at both the elementary and secondary levels. Teacher of record at elementary and secondary levels. Comprehensive case management and service provider.

Publications (Selective List)

- Johnson, D, (2018, 2017, 2016. 2015 2014) Solicited editorials for Evollution online periodical.
- Johnson, D. & Schnitz, J. (2011) Book Chapter, *ePortfolios in Everyday Education, chapter in book*; authors, Ittelson, J. et. al, *Documenting Learning with ePortfolios: A Guide for College Instructors*, Jossey-Bass (in press).
- Johnson, D (2008). Collaborative development of assessments at Western Governors University, *Assessment Update*, 20(1), 10, 16.

- Johnson, D (2005). Special education q & a: New IDEA. Scholastic Administrator, <http://www.scholastic.com/administrator/feb05/articles.asp?article=pluggedin>.
- Johnson, D. (2004). Slaying the dragon part 4: prevention and intervention. The Utah Special Educator, 24(4), 30-31.
- Johnson, D. (2003). Slaying the Dragon: Part 3...instruction, instruction, instruction. The Utah Special Educator, 24(3), 38-39.
- Johnson, D. (2003). Slaying the dragon part 2: NCLB-more learning for more students more often. The Utah Special Educator, 24(2), 28-29.
- Johnson, D (2003). Slaying the dragon: NCLB. The Utah Special Educator, 24(1) 26-27
- Johnson, D. (2003). Making the most of your money: Expect the unexpected. The Utah Special Educator, 23(4), 44.
- Johnson, D. (2002). Making the most of your money; Simple secrets. The Utah Special Educator, 23(2), 38.
- Johnson, D. (2002). Making the most of your money. The Utah Special Educator, 23(1), 31.
- Johnson, D.L. (2001). The other side of the IEP table. The Utah Special Educator, 22(3), 16-17.

Conference, Seminar, Workshop Presentations, Other Scholarship (Selective List)

Rubric Design for Campus-wide Use. Pre-conference workshop: 2019 Valencia Community College Learning Assessment Conference, February 17, 2019 Zane T. co-presenter. Orlando, FL

Eduventures Summit 2017 – Competency-based Innovation University profile, keynote panelist.

Large Scale Rubric Design and Development (invited back), Full day pre-conference workshop: 2014

IUPUI Assessment Institute, Oct 28, 2014, Zane T. co-presenter Indianapolis, IN.

Large Scale Rubric Design and Development, Full day pre-conference workshop: 2013 IUPUI Assessment Institute, Oct 26, 2013, Zane T. and Robison, J. co-presenters. Indianapolis, IN

USU First Annual Innovative Strategies Summit, 2012; Conference Chair. Secured participation as keynote speakers by Sal Kahn, CEO of the Kahn Academy, Henry J Eyring, co-author with Clayton Christensen on *The Innovative University, Changing the DNA of Higher Education from the Inside Out*; and Jane Wellman, Executive Director of the Delta Cost Project.

State Authorization; It is a Jungle Out There: UWEX Distance Teaching and Learning Conference, Aug 8-10, 2012.; Jeannie Yockey-Fine and Reed Scull co-panelists, Rick Shearer, Moderator.

Strategic Advocacy with State and Federal Policymakers: A How-to Discussion; UPCEA Conference, Portland, OR. March 25, 2012.; Jeannie Yockey-Fine; Ronda Menlove, Eric Denna copresenters.

Data Driven in Everyday Education: WCET Conference, Denver CO. Oct. 2011. Mutchie, J & Gutierrez, M. co-presenters.

Performance Assessment in Everyday Education. James Madison University Assessment Institute Harrisonburg, VA. June, 2011.

Competency Based Education and Performance Assessment: WGU's Model for Success Collaborative Exchange hosted by TaskStream. Schnitz, J. W. co-presenter. Feb, 2011.

Decision Precision: Low Inference Performance Based Assessment Rubric Development. Full day workshop accepted by AERA for 2009 conference in San Diego, CA.

Large Scale E-Portfolio Program Design, Delivery, and Outcomes. Breakout session at Assessment Institute, Indiana University Purdue University Indianapolis, Indianapolis, IN Oct 26-28, 2008.

Rubric Development: Increasing Validity while Reducing Subjectivity. Breakout session at International Assessment and Retention Conference, St. Louis, MO, June 2007.

Domain Development and the Role of Technology in Assessment and Retention of Students in Higher Education; Pre-conference Workshop at the International Assessment and Retention Conference, St. Louis, MO. June 2007.

Performance Assessment in Distance Education. Presentation to faculty from institutes of higher education regarding WGU model of performance task design and delivery. Feb 2006

Essential Learning Skills for Secondary Students. Two-day presentation with accompanying handbook for parents and teachers. Scope of work includes organization skills, study skills, test-taking skills, independent learning skills, resources, and tools.

More Learning for More Students More Often. Workshops of varying length for teachers at all levels focusing on methods for eliminating common barriers to learning for struggling students.

Woodcock-Johnson III Standardized Assessment training. Administration, interpretation, and instructional planning related to the use of this test.

To Qualify or Not to Qualify. Training for teachers and administrators in the thorough evaluation and appropriate identification of students with disabilities. Focus on careful examination of multiple lines of evidence.

Standards Based Individual Education Plans: Focus on aligning goals and objectives to general curriculum standards.

Dynamic Indicators of Basic Early Literacy Skills. Focus on skillful administration, interpretation, and strategies of the DIBELS assessments, University of Oregon.

RIDE: Response to Individual Differences in Education. Statewide staff development in the use and application of this program. Ray Beck, project lead, Sopris West, publisher.

Other Information

- Advisor: Bottega Tech
- Board Member: American International School of Utah.
- Former Board Member, Utah Parent Center Board of Directors
- Advisory Council Member, DTDG grant, University of Georgia, Dr. Mary Wood, Principle Investigator
- Utah Team member for the eLearning Design lab beta test, for OSEP grant.