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Cross-Age Connections: The Effects of a Peer Mentoring Program on Students' Connectedness
to Self, Others and School, in Two Public Elementary Schools in the American West

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in fulfillment of final requirements for the MAED degree

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A handwritten signature in black ink, appearing to read "Suzanne Parrott", is written on a light-colored, slightly textured background.

Date: 4-3-19

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Abstract

The purpose of this research was to determine if participation in a cross-age, peer mentoring program affected student connectedness to self, others and school. The research took place at two public elementary schools in the western United States. Eighty-three students in grades K-1 and 4-6 participated. Data on student connectedness was collected before and after implementation of the mentoring program using multiple measures including student self-assessments, student and teacher prompted journals, observational field notes collected by researchers and attendance. Participation in the mentoring program was found to increase student connectedness to self, others and school for both mentees and mentors. A mentoring program proved to be an easily implemented and effective intervention to encourage self-actualization in students. Tools such as peer mentoring programs that drive students to reach their highest potentials are recommended as courses of action for all schools.

Keywords: elementary students, cross-age peer mentoring, connectedness, Maslow's Hierarchy of Needs, self-actualization

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Cross-Age Connections: The Effects of a Peer Mentoring Program on Students' Connectedness to Self, Others and School in Two Public Elementary Schools in the American West

Humans are inherently social creatures. For hundreds of thousands of years, our need to belong has propelled our survival; we rely heavily on our ability to function as a community. We depend on one another, particularly as children, to meet our most basic needs for food, water, shelter and protection. As we grow, we continue to rely on those around us to meet our psychological needs, the most fundamental being a sense of belonging and love. Having this need met is essential for developing a positive self-concept. The development of a positive self-concept aids in achieving one's full potential. Fulfillment of one's true self is often referred to as "self-actualization." Self-actualized people are motivated to contribute to society in meaningful ways. Self-actualization cannot be attained if people do not feel like they belong (Maslow & Lanfield, 1943). The connection we feel toward ourselves, others, and places where we spend our time is the driving force in who we are, and therefore what we do. Connection is imperative not only to the individual, but to the whole of society.

In a world where human connection is being redefined by technological developments, it is imperative that students feel authentically connected to their school, other people involved in their school community, and themselves. Students who learn the importance of connection take that understanding with them into adulthood. "Connectedness," as defined by Hagerty, Lynch Sauer, Patusky, and Bouwsema (1993), "[O]ccurs when a person is actively involved with another person, object, group or environment, and that involvement promotes a sense of comfort, well-being, and anxiety reduction" (p. 293). In addition to the many emotional benefits, increased connectedness also affects academic performance (Bouchard & Berg, 2017; Coyne-

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Forensi, 2016; Dubois, Halloway, Valentine, & Harris, 2002). In order to promote learning in our schools that will prepare students for life, students must be connected.

Mentoring programs are often used as a remedy for disconnection. In the traditional form, mentoring programs involve a trained adult mentoring a child, commonly outside the school setting. Cross-age mentoring (i.e., an older student mentoring a younger student) in the school setting is a form of mentoring on which there is comparatively little research. Mentoring in the school setting is a manageable way for teachers and administrators to increase students' connectedness to self, others and school and reap the wealth of associated benefits that mentoring programs are known for.

Connection, or a sense of belonging and love, is necessary for people to develop high self-regard and therefore be motivated to participate in society in ways that are significant not only to the individual, but also to others in their communities, and to the planet. For young people, these needs are often influenced by school activities. It is therefore imperative that schools nourish students' connectedness to self, others and school. Mentoring has long been known as a way to increase connectedness in young people. The purpose of this action research study was to determine if cross-age mentoring in the elementary school years has an effect on students' connectedness to themselves, others at school, and school itself.

Review of Literature

Historically, the most far-reaching and powerful purpose of school is to build a love of learning within children and encourage them to reach their highest potentials, and thus create lifelong learners that contribute to society in meaningful ways (Sloan, 2012). Therefore, schools need not only teach civic knowledge, but also civic skills--respecting others, working collaboratively, and being an active participant in community--which will support children's

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interactions with others, and with themselves (Sloan, 2012). In doing so, schools holistically prepare children for life.

Connectedness

Connectedness is the sense of belonging one feels towards others, and to institutions, such as school (Coyne-Forensi, 2016). School is the primary institution outside the home that influences a child's development. A positive connection to school, therefore, can result in a positive self-concept (Coyne-Forensi, 2016). Connectedness is an important enabling factor for academic success, motivation, increased efficacy, prosocial behavior, greater willingness to trust others and seek help, increased self-esteem, stronger and more enduring sense of optimism about the future, and improved health and well-being (Bouchard & Berg, 2017; Coyne-Forensi, 2016; DuBois et al., 2002; DuBois & Karcher, 2005). Connectedness may also play an important role in deterring undesirable outcomes such as low graduation rates, loss of ambition, gang involvement, susceptibility to misbehavior, and involvement in risk-taking behaviors (Bouchard & Berg, 2017; Coyne-Forensi, 2016; Ma, 2003). Connectedness may also be a determining factor in what motivates humans throughout their lives (Maslow & Langfeld, 1943).

Maslow (1943) used his theory of the hierarchy of needs to explain human motivation, and the path to self-actualization. He theorized that certain needs must first be met for humans to move forward to reach their ultimate unique potential. The need for belonging, or connectedness, is one of the foundational motivational needs leading to self-esteem and then self-actualization--reaching one's full potential (Maslow & Langfeld, 1943; McLeod, 2018). Encouraging students to reach their full potential should be the goal for all educational institutions. When there is a lack of this motivation in schools, we must look back down the

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hierarchy of needs to pinpoint the root of the problem. If a child's physiological and security needs have been met, we must consider their belonging needs.

Connectedness is an important factor to understand and measure in students due to its malleable properties. Karcher (2011) wrote, "Connectedness reflects actions, which can be increased or decreased through intervention and attitudes which can be shaped or developed through intervention" (p. 8). Thus, the necessity to put interventions in place that affect connectedness. A student's attitudes, perceptions and values can demonstrate how connected or disconnected one is. Measurement of positive or negative attitudes towards school, others and self can indicate the level of student connectedness to those variables.

Cross-Age Mentoring and Effects on Mentees and Mentors

Cross-age, school-based mentoring has a positive effect on students' connectedness to self, others, and society (Coyne-Forensi, 2016; DuBois, et al., 2002; Garringer & MacRae, 2008; Karcher, 2005; Karcher, 2008a; Karcher, 2008b; Karcher, Davis, & Powell, 2002). Cross-age mentoring programs are structured with an older student mentoring a younger student, usually in a school setting (MENTOR/National Mentoring Partnership, 2007). Often, the focus of cross-age mentoring (as opposed to tutoring) is on the mentoring relationship itself, and it is through the development of this relationship that mentees and mentors increase feelings of connectedness, and related aforementioned benefits (Karcher, 2005; MENTOR, 2007). Coyne-Forensi (2016) noted that younger students relate more with older students than with adults, and therefore the mentee might be more receptive to the offerings of the mentor.

Cross-age mentoring impacts both mentees and mentors in terms of connectedness (Coyne-Forensi, 2016; DuBois, et al., 2002; Garringer & MacRae, 2008; Karcher, 2005; Karcher, 2008a; Karcher, 2008b; Karcher, Davis, & Powell, 2002). For mentees, this

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connectedness to self is demonstrated by an increase in students' feelings of competence and self-efficacy, as well as greater academic achievement (DuBois et al., 2002; Garringer & MacRae, 2008; Karcher, 2008a). Mentees also exhibited an increase in social skills, prosocial attitudes, confidence, and self-esteem (DuBois et al., 2002; Karcher, 2008a). Increases in self-esteem are a guiding factor in self-actualization (Maslow & Langeld, 1943). In school-based mentorships, there is an increase in mentees' school attendance (i.e., connection to school) with the possible link being that students do not want to miss out on time with their mentor (Coyne-Forensi, 2016; Karcher, Davis, & Powell, 2002). Mentees showed improvement based on mentors' attendance, which demonstrates that improvement was connected more to mentor relationships than to the curricula (Karcher, 2005).

School-related connectedness (i.e., increased attendance) is also observed in mentors, perhaps because mentors have a greater incentive to attend school as a result of their responsibility to their mentee (Coyne-Forensi, 2016; Karcher, 2008b; MENTOR, 2007). Mentors also tend to feel more connected to their teachers, and think of them as colleagues (Karcher et al., 2002). Mentors' relationships with their parents is also positively affected; adolescent students in mentor programs have shown an increase in connectedness to parents while students in the control group have shown a decrease in connectedness to parents (Karcher et al., 2002; Garringer & MacRae, 2008). General increases in social connectedness are observed as mentors gain greater adeptness in empathy, moral reasoning, communication, and conflict resolution (Garringer & MacRae, 2008; Karcher et al., 2002; MENTOR, 2007). Mentors are found to be more conscious of their behaviors and choices, take on leadership roles and other responsibilities, and become stronger collaborators, which point to increased positive connection to self (Coyne-Forensi, 2016; Karcher, 2008a). Similarly, modeling identity development to

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younger students encourages mentors to reflect on social roles, which can result in increased self-confidence (Coyne-Forensi, 2016; Garringer & MacRae, 2008; Karcher, 2008b; MENTOR, 2007). As previously noted, increased self-esteem often results in students becoming self-actualized (Maslow & Langfeld, 1943).

A good relationship with an older child can positively affect the younger child's feelings of self-worth (MENTOR, 2007). Respect from others defines one's self-esteem, which is necessary to becoming self-actualized (Maslow & Langfeld, 1943). Unfortunately, the opposite can be true for bad relationships, or relationships that end prematurely (Spencer, 2007). Likewise, older mentors can, often unintentionally, model age-inappropriate behaviors (MENTOR, 2007). The presence of physiological disorders or histories of abuse in the participants can accentuate these risks (Karcher, 2008b). Risks can often be reduced by monitoring the program implementation and termination, which will be discussed in the following section (Garringer & MacRae, 2008; MENTOR, 2007).

Research-Based Practices

The research on cross-age mentoring programs, albeit limited, has demonstrated that mentoring programs are most effective when there is structure (DuBois et al., 2002; Karcher & Nakkula, 2010; MENTOR, 2007). The design of the cross-age mentoring program should allow for at least a two-year age range between mentor and mentee and/or the children attend different schools, and the program lasts at least a year with expectations about the frequency of contact (Coyne-Forensi, 2016; DuBois et al., 2002; Garringer & MacRae, 2008; MENTOR, 2007). Research demonstrated that frequency of contact was a better predictor of positive outcomes of a mentoring program than the duration of the program, but emotional closeness also affects the outcomes of a program (DuBois et al., 2002; Karcher, 2008a). A structureless program has been

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found to be notably ineffective because there is no stated focus, and therefore a child's need for meaningful personal interactions is not often met (Karcher & Nakkula, 2010). A prescriptive program is also ineffective, but the needs of the participants, developmental and otherwise, should be considered (DuBois, & Karcher, 2005; Karcher & Nakkula, 2010). It should be noted that developmental needs might differ for mentees and mentors, depending on the age of the students (DuBois, & Karcher, 2005). For instance, younger students (mentees) might be more engaged in physical, fun, play-based activities (DuBois, & Karcher, 2005). When planning activities, teachers can identify the needs of the participants and plan activities to meet those needs—the focus of which should be relational—and then determine partnerships and resources to support the program (Karcher & Nakkula, 2010; Garriger & MacRae, 2008).

For a mentoring program to be effective, the following should also be present: mentors should receive initial and ongoing training, program implementation should be closely monitored, and there should be a termination procedure in place (Coyne-Forensi, 2016; DuBois et al., 2002; MENTOR, 2007). Mentors must be trained in the aforementioned relational approach (MENTOR 2007). Training of any sort is often neglected, but it is of the utmost importance; mentors need support for feelings of discomfort with the mentoring process, if present, so as not to affect the relationship with the mentee (MENTOR, 2007). Along with monitoring the mentor's comfort with their responsibilities, a trusted adult must also monitor that the mentors are modeling age-appropriate behaviors to their mentees and that mentors are attending the meetings—unexplained absences can result in the aforementioned risks (DuBois et al., 2002; MENTOR, 2007). Mentees can also receive informal training in how to use their mentor relationship to its highest potential (MENTOR, 2007).

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Lastly, programs should consider a way to measure the effectiveness of the program, which consider the desired outcomes of the program (i.e., connectedness) rather than the program itself (DuBois et al., 2002; Garriger & MacRae, 2008). To conclude, there is generally a lack of research on effective cross-age mentoring and, of course, there is no one program that is going to meet the needs of all participants, but as Coyne-Forensi (2016) wrote: "...[A]n opportunity, however small, to positively influence each other in a supportive environment was more valuable than no opportunity at all" (p. 77). It was our intention to promote connectedness in our school sites through a mentoring program.

Statement of Purpose

The purpose of this study was to determine the effects of a cross-age mentoring program on elementary aged students' connectedness by measuring student attitudes about school, others and themselves using multiple measures. Both mentees and mentors came from the same elementary schools, making this model an easy acquisition for other schools who may be interested in implementing a cross-age mentoring program. An understanding of student connectedness and its implications could assist teachers in instilling a lifelong love of learning in students, thus altering the course of the students' futures, and infinite futures to come.

Methodology

Design of Study

This study used an experimental design. Artifacts including pre and post student self-assessments and prompted journals (completed by both students and teachers) were used to gather information about student connectedness to self, others and school before and after the intervention (see Appendices A, B and C). In addition, and to establish triangulation, school

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attendance records, field notes and responses to informal interviews were collected throughout the intervention to measure the effectiveness of the intervention.

Setting and Subjects

This research was conducted in two public elementary schools in the western United States with a total of 83 student participants (see Table 1). At one location, there were 21 mentees (8 females and 13 males) in the 1st grade, and 22 mentors (4 males and 18 females) in grades 4-6. The mentees for this sample were all in the same classroom, while the mentors volunteered to participate in the program and were in several classrooms at the school. Mentors participated in an after-school program where they received initial and ongoing training, in addition to the school-based aspect of the program. At the second school setting, two complete classrooms participated, consisting of 19 mentees (10 females and 9 males) in kindergarten and 1st grade, and 21 mentors (7 females and 14 males) in grades 4-5. All programming took place during the regular school day, including mentor training.

Data Collection Tools

An adapted Hemingway Measure of Pre-Adolescent Connectedness, a likert scale to measure connectedness to self, others and school, was used as a pre and post student self-assessment (see Appendix A). Additionally, students wrote or drew in prompted student journals both before and after the study. The prompts directed students to describe how they felt about school, teachers, classmates/other children at school, and themselves (see Appendix B). Teachers of participating students also completed prompted journals before and after the study about their perceptions of student connectedness (see Appendix C). The researchers collected anecdotal notes throughout the study of any observations that related to connectedness and the program itself (including responses to informal interviews with participants). Lastly, school

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attendance records were collected prior to and throughout the study to investigate if participation in the mentoring program affected attendance.

Procedure Outline

Before the intervention, students completed the adapted Hemingway Measure of Pre-Adolescent Connectedness (see Appendix A) and the prompted student journals (see Appendix B) anonymously. The statements on the Hemingway and in the journal were read and explained to students as necessary. Teachers completed the prompted journals (see Appendix C). The responses to the journals were categorized based on demonstration of positive connection, negative connection, a combination of both, or unclear responses. Students participated in a six-week cross-age peer mentoring program, in which mentors met with their mentees (teachers assigned the partnerships) for at least thirty minutes each week. Before the mentors met with their mentees for the first time, mentors were trained, and they received ongoing training from a participating teacher/researcher. The program concluded with a celebration. These practices aligned with research-based best practices. Throughout the program, researchers collected and reflected on observational data on student connectedness and effectiveness of the program. At the end of the six weeks, the Hemingway and journals (student and teacher) were completed and analyzed again for comparison. Attendance data was collected prior to and throughout the program as part of normal school practice and was analyzed at the end of the study.

Analysis of Data

The research questions that guided this study were: will participation in a cross-age peer mentoring program affect students' connectedness to self? Will participation in a cross-age peer mentoring program affect students' connectedness to others? And, will participation in a cross-age peer mentoring program affect students' connectedness to school? The research design was

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experimental, and pre and post student self-assessments, prompted student and teacher journals, school attendance records, and field notes (including responses to informal interviews) were collected throughout the intervention to measure student connectedness to each of the variables.

The subjects for this study were from two public elementary schools in the western United States. There were 83 total students from multiple classrooms in grades K-1 and 4-6 (see Table 1). Five teachers/staff also responded to the prompted journals.

Table 1

Sample Demographics

Location 1	1st (Mentees)		4th-6th (Mentors)	
	Males	Females	Males	Females
	13	8	4	18
Location 2	K-1st (Mentees)		4th-5th (Mentors)	
	Males	Females	Males	Females
	9	10	14	7
Total for Both Locations	K-1st (Mentees)		4th-6th (Mentors)	
	Males	Females	Males	Females
	22	18	18	25

Connectedness to Self

The first research question addressed by this study dealt with the effects of a cross-age peer mentoring program on students' (mentor and mentee) connectedness to self. This question was addressed using data from the "self-esteem" and "self-management" subscales of the Hemingway Measure of Pre-Adolescent Connectedness (see Appendix A). The responses to the statements from these subscales on the pre and post assessments were averaged and then pre and post self-assessments were compared (see Figure 1). Note that only mentors completed the

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Hemingway. Responses to prompted student journals for both mentees and mentors (“how do you feel about yourself?”) were analyzed for demonstration of positive or negative connection (see Tables 2 and 3 and Appendix D). Responses to teacher journals (“think back across the last two weeks, can you remember any interactions or events that you have had with students in your class which demonstrated the students’ connection or lack of connection to themselves?”), and field notes (both comparatively limited because there are less teachers than students) were categorized according to demonstrations of positive and negative connection (see Table 4).

Connectedness to Others

The second research question addressed by this study dealt with the effects of a cross-age peer mentoring program on students’ connectedness to others--specifically in the school setting. This question was answered using data from the “teachers,” “peers,” “friends,” “self-management” and “social desirability” subscales of the Hemingway Measure of Pre-Adolescent Connectedness (see Figure 1). Responses to prompted student journals for both mentees and mentors (“how do you feel about your teachers?” and “how do you feel about your classmates and other children and school?”) were analyzed for demonstration of positive or negative connection (see Tables 2 and 3 and Appendix D). Responses to teacher journals (“think back across the last two weeks, can you remember any interactions or events that you have had with students in your class which demonstrated the students’ connection or lack of connection to others?”) and field notes were categorized according to demonstrations of positive and negative connection (see Table 4).

Connectedness to School

The last research question addressed by this study dealt with the effects of a cross-age peer mentoring program on students’ connectedness to school. This question was answered

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using data from the “teachers,” “school” and “self-management” subscales of the Hemingway Measure of Pre-Adolescent Connectedness (see Figure 1). Responses to prompted student journals for both mentees and mentors (“how do you feel about school?”) were analyzed for demonstration of positive or negative connection (see tables 2 and 3 and Appendix D).

Responses to teacher journals (“think back across the last two weeks, can you remember any interactions or events that you have had with students in your class which demonstrated the students’ connection or lack of connection to school?”) and field notes were categorized according to demonstrations of positive and negative connection (see Table 4). Attendance records from before and during the program were also analyzed (see Table 5).



Figure 1. Results from The Adapted Hemingway Measure of Pre-Adolescent Connectedness on Mentors

The results of the adapted Hemingway Measure of Pre-Adolescent connectedness demonstrated increased connection to self, others and school when comparing the pre-assessments to the post assessments. The greatest increase occurred in connectedness to others.

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Table 2

Mentee Student Journals

	School		Teachers		Others		Self	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Positive	74.57%	71.25%	86.75%	68.13%	74.57%	61.67%	63.46%	61.88%
Negative	3.85%	9.79%	3.85%	12.71%	13.25%	19.17%	13.25%	15.83%
Both	10.47%	0.00%	3.85%	9.79%	3.85%	3.33%	6.62%	6.46%
Unclear	11.11%	18.96%	5.56%	9.38%	8.33%	15.83%	16.67%	15.83%

The responses to the mentee student journals (see Appendix D for coded responses) demonstrated a decrease in connection (i.e., decrease in positive responses and/or increase in negative responses) to school, teachers, others and self. There was a higher percentage of “both” (combination of positive and negative) responses for connection to teachers in the journals completed after the program. “Unclear” (the responses did not demonstrate positive or negative connection) responses increased in the journals completed at the end of the program for all categories except connection to self.

Table 3

Mentor Student Journals

	School		Teachers		Others		Self	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Positive	76.19%	83.33%	83.33%	83.63%	54.76%	45.91%	57.14%	72.37%
Negative	4.76%	2.78%	9.52%	5.56%	11.90%	11.11%	9.52%	8.33%
Both	16.67%	2.78%	4.76%	8.04%	23.81%	29.09%	14.29%	13.74%
Unclear	2.38%	11.11%	2.38%	2.78%	9.52%	13.89%	19.05%	5.56%

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An increase in connection (i.e., an increase in positive responses and/or a decrease in negative responses, see Appendix D) was demonstrated in all categories other than connection to others. In connection to others there was an increase in “both” and “unclear” responses.

Table 4

Responses Teacher Journals

Connection to School				
		Pre	Post	
Positive	Negative		Positive	Negative
Participated happily	Frequent absences		Increased engagement (including in cross-age activities)	
Increased parent involvement	Low check ins to start the day		Increased parent involvement	
	Lack of engagement in schoolwork		^a Anxiety about transitioning to middle school	
	Disrespectful to school property			

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Connection to Others					
		Pre			Post
Positive			Negative	Positive	Negative
Increased participation in cross-age activities	Lack of empathy		Increased classroom community		Lack of empathy
Talkative	Disengagement with others		Helping classmates		
Hellos and hugs	Meanness/bullying		Mentees seek out mentors outside of mentoring program time		
	Behavior plans in place to support positive social connections		Increased cross age connections at transitions times (i.e., hugs in the hallways)		
			Increased emotional safety		

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Connection to Self			
	Pre		Post
	Positive	Negative	Positive
			Negative
Writing stories about self/family		Disconnection from reality	Authentic connection circles
Taking care of needs independently	Negative emotions	Negative self-talk	Anxiety/depression
	Not advocating for needs		Connection to feelings, and how they are affected by the actions of others
	Lack of organization/ executive functioning		Increased sense of purpose (mentors)
	Anxiety/depression		

^awhile anxiety might be considered a negative emotion, its presence demonstrates a level of connectedness to current school

There was an increase in positive responses and/or a decrease in negative responses in all categories in the teacher journal, and responses indicated increased connection to self, others and school. Specific positive references to the mentoring program were observed in the journals completed at the end of the program.

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Table 5

Attendance

Location	Age	Prior to Mentoring	During Mentoring	Difference
1	1st (Mentees)	90.02%	90.78%	0.76%
	4th-6th (Mentors)	93.09%	94.01%	0.92%
2	K-1st (Mentees)	92.52%	91.37%	-1.15%
	4th-5th (Mentors)	90.91%	92.60%	1.69%
Both	K-1st (Mentees)	91.27%	91.10%	-.020%
	4th-5th (Mentor)	92.00%	93.31%	1.31%

There was an increase in all attendance except for mentees at location 2. The combined student attendance increased for mentors and decreased for mentees.

Action Plan

The purpose of this study was to determine the effects a cross-age peer mentoring program had on elementary school students' connection to self, others and school. Though many factors impact a student's connectedness to self, others and school, our research demonstrated that a mentoring program is a profound intervention that positively affects connectedness. Based on the findings of this study, the following conclusions were drawn:

- The mentoring program definitively increased connectedness to self, others and school for mentors. The overall positive responses to the Hemingway (see Figure 1), as well as

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the responses to the teacher journals and observations by the researchers (see Table 4), demonstrated increased connection in all areas. Although positive responses to the student journal prompt regarding connectedness to others decreased, it is the opinion of the researchers that the Hemingway is a much more accurate, detailed, and thorough design to measure one's connection to others. Attendance for mentors also increased for both locations (see Table 5). Prior research indicated that participation in a mentoring program often provided mentors with a greater incentive to attend school. One mentor wrote, in the student journal completed at the end of the data collection period, "I feel excited when I come to school because I like working with my mentee."

- Prior research found mentors to have an increase in self-confidence, which resulted in students taking on more leadership roles and other responsibilities at school. The increase in connection to self demonstrated by the Hemingway, the positive responses to the student journal prompt regarding connection to self, and teacher reports of increased sense of purpose in mentors, align with the prior research. This further demonstrates an increase in self-esteem in mentors, which is necessary to achieve self-actualization.
- The responses to the teacher journals demonstrated an increased connection to self, others and school for mentees. The researchers believe the age of the mentees (see Table 1), affected their response to the student journals since reflecting on the cumulative past can be a developmentally challenging for young students. Researchers also believe some outside factors concerning the students in the mentee classrooms at both sites (including the resignation of the mentee classroom teacher the week final data was collected), potentially affected the responses to the student journals for the mentees. Though mentee student responses showed a decrease in connection, teachers wrote that mentees were

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observed seeking out their mentors even outside the program time. One teacher recalled a connection circle in which the students were prompted to describe their favorite invention, and one mentee responded, “My favorite invention is mentors.”

- The literature stated that a simultaneous increase in attendance for mentees and mentors, as observed at one school setting (see Table 5), demonstrates that the effects on attendance could be the result of the mentoring relationship.
- Mentoring programs positively affect connectedness, and have many other benefits for both mentors and mentees. For instance, teachers reported increased classroom community (including students helping one another), increased engagement (including in cross-age activities) and an increase in feelings of emotional safety after participation in the mentoring program. These observations align with prior research into connectedness and demonstrate an increase in student motivation to achieve their highest potentials.
- Teachers also reported that parent involvement at school increased post mentoring program. The prior research indicated that mentoring programs can impact connectedness in parents/families as well as students, though it was not specifically measured in this study.
- Researchers also noted the mentoring program inspired other classrooms, teachers and students outside of the study. After the program started, researchers were approached by a number of students who wanted to become mentors and teachers who wanted mentors in their classrooms. Positive interactions between grade levels in the hallways and on the playground were also noted.

Based on the conclusions of this study, the researchers found that school-based, cross age peer mentoring programs, due to their ease of implementation, are a positive intervention for

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schools where connectedness seems lacking. The following recommendations are given as courses of action:

- In implementing a peer mentoring program, research-based best practices ought to be adhered to, including initial and ongoing training and reflection time for mentors, as this is beneficial for the relationship of both mentees and mentors; and working closely with participating teachers, as staff buy-in is necessary to a successful program.
- Mentoring programs should last an entire year or longer. The researchers believe that the degree of positive changes in connectedness were impacted by the relatively short data collection period of the study.
- Future researchers should consider the challenges associated with collecting data from young students.
- Jonathan Cohen, the cofounder and president of the National School Climate Center, stated, “[D]istricts...need guidelines, tools, and resources that would help them engage educators, students, parents or guardians, and community members in creating safer, more supportive, engaging, and challenging schools” (Sloan, 2012). The researchers are in agreement with this recommendation and find mentoring programs to be a great tool to create the sort of schools that encourage children to reach their highest potentials.

Regardless of the tool used, teachers ought to consider the effects of connectedness on students and schools.

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Appendix A

Adapted Hemingway Measure of Pre-Adolescent Connectedness

The statements of the Hemingway have been color-coded according to the subscales. A key is included below.

Adapted Hemingway Measure of Connectedness				
1=Not True, 2=Sort of True, 3=True, 4=Very True				
I work hard at school.	1	2	3	4
I like almost all of the kids in my class.	1	2	3	4
My friends spend a lot of time together.	1	2	3	4
I try to get good grades in school.	1	2	3	4
There are many kids at my school who I do not like.	1	2	3	4
I can name several things that other kids really like about me.	1	2	3	4
I don't care what my teachers say.	1	2	3	4
I get into fights with other kids.	1	2	3	4
I like to spend time with my friends.	1	2	3	4
I feel good about myself at school.	1	2	3	4
I have a hard time paying attention in math class.	1	2	3	4

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I have fun with the other kids in my class.	1	2	3	4
I always do what my teachers tell me to do.	1	2	3	4
I always get bored in school.	1	2	3	4
My teachers like the kind of kid I am	1	2	3	4
I really like my teachers.	1	2	3	4
I never get in trouble at school.	1	2	3	4
I trust my friends.	1	2	3	4
I like school.	1	2	3	4
I can't sit still in class.	1	2	3	4
My friends and I argue too much.	1	2	3	4
My parents are always proud of me.	1	2	3	4
School				
Peers				
Friends				
Teachers				
Self-esteem				
Self-management				
Social-desirability				
Bold is Reverse Coded Questions				

Appendix B

Student Journals



How do you feel about school?



How do you feel about your Teachers?



How do you feel about your classmates
and other children at school?



How do you feel about yourself?

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Appendix D

Student Journal Coding Classifications

Positive		Unsure		Both		Negative	
Words	Drawings	Words	Drawings	Words	Drawings	Words	Drawings
athletic	butterflies		blank (no response)	both		annoying	angry face
awesome	face with sunglasses		no face	Fine		bad	crying face
comfortable	flowers		ocean waves	kind of		boring	sad face
confident	happy face		sleeping face	Ok		fat	
cool	hearts		straight mouth	some		frustrating	
excited	holding hands			sort of		goof off	
fun/funny	thumbs up					hate	
good						horrible	
good citizen						mad	
happy						mean	
important						naughty	
joyful						negative	
kind						nervous	
learning						no good	
like family						No learning	
love						rude	
nice						taken for granted	
pay attention						ugly	
respectful						weird	
rocks							
terrific							
trust							

Note. Journal responses classified as "both" had elements of both positive and negative or words that indicated mixed emotions. Journal responses classified as "unclear" did not indicate either a positive or negative connection, the response did not relate to the question asked, or were left blank.