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The effect of implementation of the Developmental Designs for Middle School (DDMS) program on the social skills of 7th grade students

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**THE EFFECT OF IMPLEMENTATION OF THE DEVELOPMENTAL DESIGNS
FOR MIDDLE SCHOOL (DDMS) PROGRAM ON THE SOCIAL SKILLS OF 7TH
GRADE STUDENTS**

by

Emmalene Hall Probst

A Thesis

Submitted to the
Department of Interdisciplinary and Inclusive Education
College of Education

In partial fulfillment of the requirement

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Master of Arts in Special Education

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Thesis Chair: S. Jay Kuder, Ed.D.

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Abstract

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THE EFFECT OF IMPLEMENTATION OF THE DEVELOPMENTAL DESIGNS
DESIGNS FOR MIDDLE SCHOOLS (DDMS) PROGRAM ON THE SOCIAL SKILLS
OF 7TH GRADE STUDENTS

2016-2017

S. Jay Kuder, Ed.D.

Master of Arts in Special Education

This study examined the effects of implementing the *Developmental Designs for Middle School (DDMS)* program on the school connectedness of students with and without special needs in a seventh grade inclusion class in a middle school in a suburban community in southern New Jersey. Of the 23 participants in the study, 10 were students with special needs who were eligible for special education services and had individual education plans (IEPs). Of those 10 students, four qualified for IEPs under Other Health Impaired, four qualified under Multiply Disabled, and two qualified under Specific Learning Disability. The other thirteen students were general education students.

The findings of this study indicate that the implementation of the Developmental Designs for Middle School program in 7th grade classrooms may increase feelings of connectedness and perceived belongingness for general education students as well as students with disabilities. DDMS strategies within the classroom, as well as the advisory meetings, is a program that should be further studied and looked in to as a resource for increasing school connectedness for middle school students.

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Chapter 1

Introduction

Second only to family, school is the most important stabilizing force in the lives of young people. The extent to which schools create stable, caring, engaging, and welcoming environments is the extent to which our kids will thrive. Middle School can be an extremely difficult time for students. It is a time in their lives when many adolescents are going through changes physically, mentally, with their peers, at home, and more. There are also added stresses associated with the middle school transition. These are changes and stresses that the majority of middle school aged students experience, yet students often feel alone and fear to be different in any way from their peers. According to Blum and Rinehart (1996), when students feel connected to their school and a sense of belonging, they show lower at-risk behaviors and attitudes. “Middle School should be a place where close, trusting relationships with adults and peers create a climate for personal growth and intellectual development.” (Jackson & Davis, 2000).

What exactly do school connectedness and belongingness mean? In order to succeed, students need to have a sense of attachment to their school. According to Robert Blum (2005), there are seven qualities that seem to influence positive attachment to schools: having a sense of belonging, enjoying school, having friends at school, being engaged in their own academic progress, recognizing that teachers are supportive and caring, feeling that school discipline is effective and fair, and participating in extracurricular activities. Each of these factors brings a sense of connection to oneself, one’s friends, and/or one’s community, and therefore makes it clear that school connectedness has a major influence on the lives of youth. Healthy relationships with

peers and teachers, participation, and a sense of belonging are all important factors in feeling connected to school, and when students feel connected, they do better. Current models of standardized testing seem to favor heavily on the academic factors of school, but research shows that non-academic facets are also extremely important contributors to student success.

There are many things schools and teachers can do to help students feel more connected. By creating welcoming, caring, stable, and engaging environments, schools are helping their students create connections. “Critical requirements for feeling connected include high academic rigor and expectations coupled with support for learning, positive adult-student relationships, and physical and emotional safety” (Blum 2005). Students with learning and/or behavior difficulties often feel most alienated from school as a result of requiring more specialized academic and behavioral services. Sometimes these services are provided in a smaller, self-contained classroom, which requires them to be removed from the general education setting and their general education peers. According to Aron and Loprest (2012), special education students continue to lag behind their nondisabled peers in educational achievements. Expectations of them are often lower, they are less likely to take the full academic curriculum, and they are more likely to drop out of school. This can produce challenges academically and behaviorally, and it can lead to special education students feeling less connected to the school environment and their teachers (Reschly & Christenson, 2006; Shaunessy & McHatton, 2009).

Students spend 7 hours in school, Monday through Friday. The idea of belonging, identifying, participating in school, and being motivated requires a sense of connection

on the part of the student. Students who have close, positive, supportive relationships with their teachers and peers will attain higher levels of achievement (Kaufman & Sandiols 2016). When schools and teachers help facilitate and build these strong connections, student belongingness and connectedness will increase.

In this study, I will examine the effectiveness of implementing the *Developmental Designs for Middle School* (DDMS) program in 7th grade classrooms. DDMS is a program that uses practices that integrate social and academic learning. Student success relies on a mix of social skills, good relationships, and being engaged with their learning. The practices within DDMS are designed to help teachers create a classroom and school environment that encourages strong relationships and engagement in school. The aspects of DDMS meet middle school students' needs by allowing them to feel connected, heard, empowered, and safe. DDMS focuses on implementing developmentally appropriate practices and content, building social-emotional skills, responding to rule-breaking, motivating students to achieve academically, intervening with struggling students, creating inclusive learning communities, and building a strong, healthy adult community (Developmental Designs). The DDMS program states that in order for students to have optimum success, teachers and administrators not only need to carefully orchestrate students' intellectual climate, but their social climate as well. Using their advisory program of 15-30 minutes per day, students are offered a consistent, dependable opportunity to get to know themselves and each other, build social skills, warm-up their brains in a variety of challenging and relevant ways, and to have fun while doing all of this. Once the students are familiar with this structure, it can be used throughout the day

to ensure that every school day is productive, safe, and enjoyable for everyone. This study will examine the use of these structures within the classrooms.

The research questions examined in this study are:

- Does the implementation of the *Developmental Designs for Middle School* program in 7th grade classrooms increase students' feelings of connectedness and students' perceived belongingness?
- Does the DDMS program improve the school connectedness and perceived belongingness of 7th grade students with disabilities?

I believe that empowering middle school aged students through the DDMS program will have a positive impact on their connectedness to school and their sense of belonging. The DDMS program teaches students how to communicate and socialize appropriately with peers who they wouldn't normally talk to or work with on a daily basis. It empowers them to grow into making independent decisions, allows teachers to move students towards competence, and assists them in building relationships, all while having fun.

A program such as DDMS is designed to help build community and trust and teach social skills within the classroom and school. This will facilitate stronger feelings of belonging and connectedness among students. Early on in the DDMS program, students are taught social skills. Throughout the program these skills are reinforced, strengthened, and built upon. When students are taught how to communicate and interact appropriately with their peers and adults within the school building, while also being allowed to have independence, they are able “to operate successfully within a caring,

inclusive, safe school community to which they feel connected, a community within which they can grow and have fun at the same time” (Crawford 2008). Having a strong connection to your school is beneficial to all students, whether they are general education students, students with special needs, including those with learning and behavior difficulties, and those who are English learners.

To summarize, in this study I will attempt to determine the effect of the implementation of the *Developmental Designs for Middle School* program in 7th grade classrooms on school connectedness and students' perceived belongingness. DDMS is designed to help build community and trust and teach social skills within the classroom and school. Student success relies on a combination of these things, especially social skills, strong relationships, and engagement with learning. No matter their ability level, students who feel stronger connectedness to their school show lower at-risk behaviors and attitudes (Blum & Rinehart 1996) and are more likely to succeed.

Chapter 2

Review of Literature

School Connectedness

School connectedness occurs when students feel that they are an important part of their school and feel an attachment to the adults and other students within their school. It includes a sense of belonging to a community, trusting their teachers and administration, feeling safe while at school, and feeling confident in the commitment their school has to them. When these factors are strong for students, they become more invested and committed to their school. These connections are important to students' overall health, as caring and supportive relationships can lead to students making more positive decisions.

Youth spend the majority of their day in school, and it is where their identities and values are often shaped. Middle School in particular is a difficult time for students. Often, the transition to a new school is one that causes a variety of emotions. In 2015, Goldstein, Boxer, and Rudolph examined stress related to transitioning to Middle School. In this study, students were surveyed about their experiences. They answered questions about stresses they associated with the transition, changes within their friendship groups, academics (including performance and motivations), school bonding, etc. The results of this study suggested that higher amounts of stress related to middle school changes (listed above) predicted lower grades, higher school anxiety, and lower school connectedness. According to Shulkind and Foote (2009), because of these added stresses it is particularly urgent for middle school educators to improve school connectedness.

Loukas, Suzuki, and Horton (2006) conducted a study with over 850 middle school students. The purpose of the study was to examine the role of school connectedness as a mediator of the effects of student-perceived friction, cohesion, competition among students, and overall satisfaction with classes. Students completed a questionnaire consisting of 161 items in Wave 1, and then 160 items one year later in Wave 2. Their results showed that connectedness did affect perceived friction, cohesion, and overall satisfaction with classes for middle school students. Their results indicated that students who reported being more connected to the school engaged in fewer conduct problems 1 year later than did their less-connected peers.

Shochet, Dadds, Ham, and Montague (2006) also found a strong correlation between weak school connectedness and mental health symptoms one year later in 12- to 14-year-old students in the areas of depression, anxiety, and general functioning. Their study evaluated a universal school-based preventive intervention addressing individual risk factors for depression in middle school aged students in Australia. They investigated the influence of school connectedness on students' mental health and functioning, using numerous psychological inventories and questionnaires such as the Children's Depression Inventory, Strengths and Difficulties Questionnaire, the Psychological Sense of School Membership Scale, etc. The students completed the questionnaires during school time on three different occasions (pretest, posttest, and 12-month follow-up). The researchers found that school connectedness correlated strongly and negatively with concurrent and future self-report symptoms of depression and anxiety and with deficits in overall functioning. The results supported the conclusion that school connectedness

predicts depressive symptoms in both boys and girls, anxiety symptoms for girls, and general functioning for boys.

The literature on student connectedness consistently suggests that the extent to which students feel a connection to their school is related to positive social, psychological, and academic outcomes. Blum (2005) states that schools can be either positive or negative forces in a child's life. School connectedness has been shown to protect youth from engaging in risky behaviors. Students who report feeling higher feelings of school connectedness report higher academic achievement, academic engagement, peer acceptance, and emotional well-being (Lohmeier & Lee, 2011). Lohmeier and Lee presented a new way to measure school connectedness called the School Connectedness Scale (SCS). They wanted to test the hypothesis that the three levels of connectedness proposed by Karcher and Lee in 2002 were underlying factors of school connectedness. According to Karcher and Lee, the levels of connectedness are General Support (Belongingness), Specific Support (Relatedness), and Engagement (Connectedness), and the sources are school (classes, activities, importance of education, etc.), teachers/adults in school, and peers. For their study, Lohmeier and Lee gave the SCS to middle school students who attended after school programs, as well as students at two high schools in very different school districts during the spring semester. The survey was expected to be applicable for all populations since feelings of connectedness (belongingness, relatedness, and engagement) are not unique to students at one age level. After analyzing the results, they concluded that improving school connectedness is an important goal for schools. They concluded that the SCS that they developed holds promise as a strong evaluation tool, as it is reliable, valid, and easy to use with students.

Chung-Do, Goebert, Chang, and Hmagani (2015), developed a school connectedness scale, and then tested just over 700 high school students who were enrolled in a school connectedness course. They found that a student's involvement in their school and supportive relationships were positively related to grade point averages. Their study found that students who feel connected to their schools are more likely to have positive educational and health outcomes.

Improving School Connectedness

Knowing that the research supports the positive impact that connectedness and belonging have on students' academic success, it is also essential to look at the research detailing how to successfully build connections for students within school. In a review of the research on school connectedness, Blum (2005) asserted that we must recognize that people connect with people before they connect with institutions. Blum goes on to say that relationships formed between students and faculty are at the heart of school connectedness. Students who perceive their teachers and administrators as creating a caring, well-structured learning environment in which expectations are high, clear and fair are more likely to be connected to school. Youth who have caring relationships with others in the school, such as their teachers and peers, are also more likely to identify with the school.

Blum (2005) identified six methods that research has found can increase school connectedness:

- Implementing high standards and expectations, and provide academic support to all students.

- Applying fair and consistent disciplinary policies that are collectively agreed upon and fairly enforced.
- Creating trusting relationships among students, teachers, staff, administrators and families.
- Hiring and supporting capable teachers who are skilled in content, teaching techniques and classroom management to meet each learner's needs.
- Fostering high parent/family expectations for school performance and school completion.
- Ensuring that every student feels close to at least one supportive adult at school.

Blum also identified several evidence-based strategies that can enhance school connectedness, such as new-student orientation programs, buddy and welcome programs, peer tutoring programs, and learning that includes group work with heterogeneous students (for example stronger and weaker students paired together).

Recognizing the importance of school connectedness, a high school in Hawaii created a course designed to help build students' sense of school connectedness in developmentally appropriate ways throughout their four years at the school. In this course, students and teachers worked to strengthen teacher support, peer relations, academic motivation, school attachment and school involvement. Chung-Do, Goebert, Chang, and Hmagani's (2005) studied the outcomes of this course. They developed a survey to evaluate the effectiveness of the course. Approximately 17 items were identified and adapted from existing scales related to school connectedness, and the survey also included 25 questions related to students' perceptions of the course and the

knowledge gained throughout the course. A total of 5 subscales were created based on the content strength of the 17 school connectedness items. These subscales included three items related to school involvement, three items about academic motivation, three items about school attachment, five items related to teacher support, and three items related peer relations. All of the quantitative items on the survey were measured with a 5-point Likert scale with 1 being “strongly disagree” through 5 being “strongly agree”. For the 17 items of interest, the data were coded so higher scores reflected a stronger sense of school connectedness. The results of the surveys confirmed an association between feelings of connectedness and five hypothesized factors: school involvement, academic motivation, school attachment, teacher support and peer relations, leading the researchers to conclude that the concept of school connectedness is a multidimensional construct. As a result, Chung-Do, Goebert, Chang, and Hmagani believe that looking at school connectedness as a multidimensional construct can help deepen the understanding of students’ complex experiences in school, and it can help improve current and future interventions that promote youth development. It was concluded that using the multidimensional perspective to view how students develop is essential to their overall wellness and will help them build a connection to their school. They state that youth behavior, feelings and thoughts are interrelated and cannot be studied in isolation, and that all of these factors have a great impact on youth wellness. By building school connectedness, schools can provide a supportive environment for their cognitive and social growth. The researchers claim that it is essential for schools to implement strategies to enhance school connectedness in the older grades when parental involvement drops, because feelings of connectedness generally decrease as students

grow older. From the results of their data, they were able to conclude that promoting school connectedness during this time in students' lives may be beneficial to promote youth wellness and educational outcomes. They found Kailua High School's PTP/L course to be a promising approach to enhance student outcomes through the relationships built and opportunities created by the course. Overall, the findings from this study suggest that this type of course may be a promising strategy to enhance students' sense of school connectedness, wellness, and provide the students' opportunities to build positive relationships.

Most studies exploring school connectedness focused on students in the general education population. It is also important to understand the experiences of special education students in relation to their school connectedness. Students in special education have Individual Education Plans (IEPs). A student may be eligible for an IEP for a variety of reasons, including specific learning disability, other health impaired, autism, visually and/or hearing impaired, emotional disturbance, etc. Kortering and Braziel (1999) interviewed 185 youth with learning disabilities. Based on the interview results, they developed categories about what the students enjoyed most and least about school. First, participants enjoyed the opportunity to socialize with peers, which as reported by participants, took place most often during breaks between or during class or during lunch. Second, participants enjoyed being active in class, experiencing success, and most enjoyed classes that they thought were interesting. Three major categories also emerged from the responses about their least favorite part of school: classes that participants found boring or too difficult, teachers whom participants viewed as mean, uncaring, or difficult, and peers who were hard to get along with, had a bad attitude, or

made fun of participants in some way. Their results also found that a lack of school connectedness was a precursor to youth in special education dropping out of school.

Shulkind and Foote (2009) researched advisory programs that promoted connectedness and student involvement. Advisory programs are organized groupings where an adult advisor meets regularly with a group of students during the school day to provide academic and social-emotional support and to act as a mentor. The advisors also act to create a personal connection to the school for the student and to facilitate a small peer community. As students get older, schools often become more isolating and impersonal. When implemented correctly, advisory programs meet the developmental needs of students. They help students develop meaningful relationships with adults, where teachers intimately know the whole-child, and help students feel as though they belong to a community of peers. These elements of connectedness have the potential to improve academic achievement and the overall school experience for middle school students. In their research, Shulkind & Foote (2009) considered an advisory group successful when the group reported high levels of connectedness. The successful advisories worked on creating a healthy community by addressing the way students related to each other. The advisors of these groups thoughtfully helped students in their advisories work out issues among themselves, and they talked openly about the importance of treating each other with respect. They had frequent conversations about friendship and exclusion, and worked on conflict resolution skills and confronting issues. There were themes of “community” and “family” within these successful advisories, and the programs and activities addressed issues of community, promoted open communication, and fostered meaningful peer relationships. The advisories also

addressed issues within the entire school community. Strong advisor leaders know and care about their advisees, closely supervise their advisees' academic progress, are problem solvers and advice givers, and give their advisees individualized attention. Shulkind and Foote (2009) found that within the successful advisories, students and advisors perceived that advisory directly improved academic performance and perceived that advisory functioned as a community of learners.

Advisory programs have been widely promoted by middle school reformers as a way to strengthen connectedness, and people engaged in middle schools recognize their value. However, there are few studies providing evidence to support advisory programs. Additionally, best practices in advisory programs have not been researched. Thus, when schools have developed advisory programs and trained faculty and staff to serve as advisors, they have relied upon intuition and anecdotal evidence rather than empirical data (Shulkind & Foote, 2009). They go on to say that there is a need for reliable information about successful programs.

According to Chung-Do, Goebert, Chang, and Hmagani, high rates of negative behaviors among our youth have increased the urgency of researchers to identify risk and protective factors to create effective programs to assist students. The goal of my research is to study the effectiveness of the Developmental Designs for Middle School program as a tool for strengthening school connectedness. Kortering and Braziel's (1999) results included several factors that students with learning disabilities said they enjoyed most and least about school, all of which are addressed in various ways with the DDMS activities.

Developmental Designs for Middle School

Developmental Designs for Middle School (DDMS) was created by *The Origins Program*. It is a program that uses practices that integrate social and academic learning and is based on the belief that student success relies on a mix of social skills, good relationships, and being engaged with their learning. The practices within DDMS are designed to help teachers create a classroom and school environment that encourages strong relationships and engagement in school. The aspects of DDMS meet middle school students' needs by allowing them to feel connected, heard, empowered, and safe. DDMS focuses on implementing developmentally appropriate practices and content, building social-emotional skills, responding to rule-breaking, motivating students to achieve academically, intervening with struggling students, creating inclusive learning communities, and building a strong, healthy adult community. The DDMS program states that in order for students to have optimum success, teachers and administrators not only need to carefully orchestrate students' intellectual climate, but their social climate as well.

The DDMS program was chosen for this study because all of the students in this middle school already participate on a daily basis in the DDMS morning advisory program. Using their advisory program of 18 minutes per day, students are offered a consistent, dependable opportunity to get to know themselves and each other, build social skills, warm-up their brains in a variety of challenging and relevant ways, and to have fun while doing all of this. Since the students are familiar with this structure, it was easiest to implement into one of their classes for this study.

In a study conducted by Terrance Kwame-Ross, Linda Crawford, and Erin Klug (2011), results indicated that there is a positive relationship between the number of teachers in a school who are trained in the Developmental Design approach and that school's adequate yearly progress (AYP) status. The researchers used participant registrations to generate a list of schools where teachers were trained in Developmental Designs, and then completed a web-based data-collection process to research the descriptive data for each of those schools. This resulted in a list of 428 schools across the country that employed one or more teachers who had received training in Developmental Designs. The statistical analysis performed on the data indicated a relationship exists between the number of DD-trained teachers in a school and that school's AYP status.

Chapter 3

Methodology

Subjects

The participants in this study were 7th grade students in a suburban middle school in Haddonfield, New Jersey. The population of the town is a little more than 11,500, and the community is relatively affluent.

The subjects in this study were from the one middle school in the district, which houses grades six through eight. The Haddonfield Middle School's 7th grade consists of 223 students broken into two teams. One team consists of 4 general education teachers, one special education teacher, and 113 students. The second team consists of 4 general education teachers, two special education teachers, and 110 students. The students are also in contact with other teachers through "specials classes," or electives.

The class that participated in the study was a general education, 7th grade Geography (Social Studies) class. In this particular class, there were twenty-three students whose mean age was 12.3 years old, with 13 years being the oldest age (7 students) and 12 being the youngest age (19 students) at the time of the study. Eighteen of the students were white, one was black, three were Hispanic, and one was Asian. Of the twenty-three students, 10 students qualified for special education and had Individual Education Plans (IEPs). Of those 10 students, four qualified under Other Health Impaired, four qualified under Multiply Disabled, and two qualified under Specific Learning Disability.

Method

Materials. The Developmental Designs strategies used in this study were focused on helping students develop a state of responsible independence in which they learn how to engineer their own success. There was a strong focus on:

1. Social learning
2. Students constructing their own understanding through exploration, discovery, and application.
3. Developing social interactions with a supportive community
4. Practicing cooperation, assertion, responsibility, empathy, and self-control
5. Focusing on physical, emotional, social, and intellectual needs as much as content
6. Building trust among adults within the learning community.

While using the DDMS strategies, the goal is for teachers to move from “Sage on the Stage” to “Guide on the Side” by empowering the students and helping them believe in their own efficacy. The strategies have to do with students reflecting on their learning as often as possible. Students learn best when school meets them where they are developmentally, and when they have regular opportunities to get to know each other, practice important social skills, and stay engaged in their learning. The DDMS book has a variety of strategies to help students build skills and engagement in social-emotional areas, relationship and community, and academically. The following are examples of *Developmental Designs* structures that were incorporated into the class during the study.

DD Structures	Description
GOAL SETTING	<ul style="list-style-type: none"> Students set long-term and daily academic and social goals for themselves and periodically assess how well they have met those goals
SOCIAL CONTRACT	<ul style="list-style-type: none"> Staff and students work together to create a set of behavioral guidelines to use throughout the year.
MODELING AND PRACTICING	<ul style="list-style-type: none"> Allows teachers and students to work together to create and become adept at specific protocols for classroom and school-wide routines
CIRCLE OF POWER AND RESPECT-CPR	<ul style="list-style-type: none"> Advisory meetings bring students together in a fun, lively, safe, respectful meeting format that includes a greeting, sharing, and activity
POWER OF PLAY	<ul style="list-style-type: none"> Incorporates group games that provide inclusive fun. Teachers build a repertoire of activities that can be used during advisory (CPR) and all day long to bring movement, teamwork, friendly competition, and enjoyment into the classroom.
ACADEMIC SKILL BUILDING	<ul style="list-style-type: none"> Teachers learn easily applicable strategies to help students be more motivated, focused, and hard-working, and pay particular attention to five research-based assets that can be built into daily academic lessons to increase motivation: STARS.
STARS	<ul style="list-style-type: none"> When planning lessons, teachers pay particular attention to the following research-based assets that can be incorporated into lessons on a daily basis to increase student motivation: Self-determination, Task orientation, Active construction, Relevance, and Social Interaction.
STUDENT CHOICE	<ul style="list-style-type: none"> Motivation increases when students get to make decisions about their learning, whether it be choosing a research topic, determining the best strategy to study for a test, how to present their work to their peers, assessing their growth, what game the group will play in advisory, etc.
PACING	<ul style="list-style-type: none"> Teachers should take advantage of all of the time they have with students. It is helpful to use the beginning and the end of the class (two prime learning times) for content introduction and reflection. The rest of the class period in between should be active and interactive, energized and should even include playful moments.

Figure 1. Developmental Designs structures incorporated

Instrument. The 54-item survey was created by Jill Lohmeier and Steven Lee in 2011 (see Appendix 1). The survey crosses the relationships between school, adults, and peers, as well as three levels of connectedness (general support or “belongingness”, specific support or “relatedness”, and engagement or “connectedness”). Each cell includes 3 items that ask about observable behavior (“My teachers give me extra help if I need it”) and 3 items that ask about feelings or values (“I think school is important”). Each item is on a 5-point scale, from 1 (Not at all true) to 5 (Completely true).

Procedure. Prior to the implementation of DDMS strategies into the Geography Classroom, the students completed the school connectedness survey. The surveys were administered to the Geography class in the month of January, on a day and time which did not interfere with other school activities. The regular education teacher handed out paper surveys to all students during their regular Geography class, and the whole process took roughly 10 minutes of class time.

The survey responses were scaled with the following options for each question: 1 for ‘strongly disagree’, 2 for ‘somewhat disagree’, 3 for ‘not sure’, 4 for ‘somewhat agree’, 5 for ‘strongly agree’.

After the completion of the first survey, the DDMS strategies were implemented into the classroom for 8 weeks. The strategies that were implemented were *Goals and Declarations*, where students established personal goals and declared their personal intentions for the remainder of the year. Students also created a *Social Contract* in which students created the rules for the classroom. *DDMS* encourages structures for nudging students back when they stray from the rules that all have agreed to follow, and provide

support for gaining student endorsement of the respectful mechanisms used for correction, which eventually strengthen their autonomy. Students consistently reflected on their work and actions to establish a learning cycle and participated in a student-centered classroom. Students were constantly encouraged to use collaborative problem-solving, exchanging ideas with others and hearing multiple points of view. The teachers used *Modeling and Practicing* and *Empowering Teacher Language*, monitoring their language to support student growth. One final strategy that was implemented into the classroom was *Power of Play*, which mixes play with learning so that physical and mental skills can develop more easily in a state of mind that is more relaxed and unguarded, ready to take risks and open to ideas. At the end of the 6 weeks, students were given the survey again to see if their feelings of connectedness improved. Selected students were then interviewed to gather more information, with a focus on the students with IEPs for more information to get specific feelings about the DDMS program.

Research design. The research design for this study was a pre-test, post-test group design. I will examine the effect of the use of the DDMS strategy on students' school connectedness.

Chapter 4

Results

Summary

In this study, we analyzed the effectiveness of implementing the *Developmental Designs for Middle School (DDMS)* program on improving students' school connectedness. One class participated in the study, taking a survey (Lohmeier, J. & Lee, S, 2011) with a series of questions to learn about the student's experiences at and opinions about their school. Students took the survey before and again after implementing various DDMS strategies for 6 weeks.

Research questions answered.

1. Does the implementation of the Developmental Designs for Middle School program in 7th grade classrooms increase students' feelings of connectedness and students' perceived belongingness?
2. Does the DDMS program improve the school connectedness and perceived belongingness of 7th grade students with disabilities?

The study began with students completing a baseline survey created by Lohmeier and Lee (2011) that contained thirty-six questions about how students feel about their school, their peers, adults at their school, connectedness to their school. After the baseline survey was given, the teachers implemented various DDMS strategies into the regular education classroom. The aspects of DDMS meet middle school students' needs by allowing them to feel connected, heard, empowered, and safe. DDMS focuses on

implementing developmentally appropriate practices and content, building social-emotional skills, responding to rule-breaking, motivating students to achieve academically, intervening with struggling students, creating inclusive learning communities, and building a strong, healthy adult community (Developmental Designs). The DDMS program states that in order for students to have optimum success, teachers and administrators not only need to carefully orchestrate students' intellectual climate, but their social climate as well. At the end of the six week trial, the students were given a post-survey (the same as the pre-survey) to see if their feelings of connectedness had improved. Lohmeir and Lee (2011) examined the results of the administration of the *School Connectedness Scale* with 260 students by applying a factor analysis to the results. This analysis identified seven factors: negative connectedness, connection with adults in school, peer connections at school, school involvement, emotional connections, value school, and comfort in this school that were associated with the scale questions as indicated in table 1.

Table 1

Factor Analysis Results for School Connectedness Scale

Category	Question
1= Negative Connectedness	7, 8, 12,13,15 , 16, 22, 26, 28, 29, 32, 33, 34
2= Connection with adults in school	2, 5, 10, 11. 17, 19, 31, 25, 36
3= Peer connections at school	21, 23, 27
4= School involvement	9, 14, 18, 30
5= Emotional connections	1, 4, 5, 20, 24, 36
6= Value School	25
7= Comfort in this school	3, 6

Results for Negative Connectedness. Table 2 shows the average scores for the group of students with Individual Education Plans (IEPs) and the group of General Education students for the questions pertaining to Negative Connectedness. The average difference between the pre-test scores and post-test scores of students with IEPs was 0.12 and the average was 0.08 for general education students. For questions 7, 13, and 22, the students with IEPs had a mean increase of 0.5 points. For question number 8, the general education students had a mean increase of 0.3 points.

Table 2

Results for Negative Connectedness

Question #	Pre (IEP students)	Post (IEP students)	Difference (IEP students)	Pre (Gen. Ed)	Post (Gen. Ed)	Difference (Gen. Ed.)
7	1.4	1.9	0.5	1.8	2	0.2
8	2.3	2.5	0.2	1.8	2.1	0.3
12	1.7	1.7	0	1.5	1.6	0.1
13	2.5	3	0.5	2.1	2.1	0
15	2.2	2.2	0	1.8	1.9	0.1
16	1	1.1	0.1	1.2	1	-0.2
22	1.2	1.7	0.5	1.3	1.5	0.2
26	4.1	3.7	-0.4	3.7	3.5	-0.2
28	2.3	2	-0.3	1.6	1.8	0.2
29	3.4	3.4	0	2.5	2.3	-0.2
32	2	2.1	0.1	1.5	1.7	0.2
33	1.3	1.5	0.2	1.3	1.4	0.1
34	2.1	2.3	0.2	1.8	2	0.2
Mean	2.12	2.24	0.12	1.84	1.92	0.08

Note: A lower score means the student is less negative toward school.

Results for connection with adults in school. Table 3 shows the average scores for the group of students with Individual Education Plans (IEPs) and the group of general education students for the questions pertaining to connections with adults in school. The average difference between the pre-test scores and post-test scores of students with IEPs was 0.06. The average for general education students was -0.16. For question 11, the students with IEPs had a mean increase of 0.5 points. For question number 17, the students with IEPs had a mean decrease of 0.4 points. The general education students had a mean decrease of 0.3 points for question 31.

Table 3

Results for Connection with Adults in School

Question #	Pre (IEP students)	Post (IEP students)	Difference (IEP students)	Pre (Gen. Ed)	Post (Gen. Ed)	Difference (Gen. Ed.)
2	3.7	3.4	-0.3	3.8	3.8	0
5	3.8	4	0.2	4.7	4.5	-0.2
10	2.2	2.6	0.4	2.4	2.2	-0.2
11	3.5	4	0.5	4.3	4.1	-0.2
17	4.3	3.9	-0.4	4.3	4.3	0
19	4.8	4.8	0	4.8	4.6	-0.2
25	3.7	3.6	-0.1	4.4	4.2	-0.2
31	4	3.8	-0.2	4.2	3.9	-0.3
36	3.8	4.2	0.4	4.6	4.5	-0.1
Mean	3.76	3.81	0.06	4.17	4.01	-0.16

Note: A higher scores shows greater adult connection.

Results for peer connections at school. Table 4 shows the average scores for the group of students with Individual Education Plans (IEPs) and the group of general education students for the questions pertaining to peer connections at school. The average difference between the pre-test scores and post-test scores of students with IEPs was -0.13. The average for general education students was 0. The general education students had a mean increase of 0.5 points for question 23. The students with IEPs had a mean decrease of 0.3 points for question 21.

Table 4

Results for Peer Connections at School

Question #	Pre (IEP students)	Post (IEP students)	Difference (IEP students)	Pre (Gen. Ed)	Post (Gen. Ed)	Difference (Gen. Ed.)
21	3.5	3.2	-0.3	4.4	4.2	-0.2
23	4.1	4.1	0	4.2	4.7	0.5
27	3.5	3.4	-0.1	3.5	3.2	-0.3
Mean	3.70	3.57	-0.13	4.03	4.03	0.00

Note: A higher score shows greater peer connection.

Results for school involvement. Table 5 shows the average scores for the group of students with Individual Education Plans (IEPs) and the group of general education students for the questions pertaining to school involvement. The average difference between the pre-test scores and post-test scores of students with IEPs was 0.15. The average for general education students was -0.18. The students with IEPs had a mean increase of 0.4 points for question 30, and a mean increase of 0.3 points for questions 9

and 18. The general education students had a mean decrease of 0.4 points for question 18.

Table 5

Results for School Involvement

Question #	Pre (IEP students)	Post (IEP students)	Difference (IEP students)	Pre (Gen. Ed)	Post (Gen. Ed)	Difference (Gen. Ed.)
9	4	4.3	0.3	4.6	4.5	-0.1
14	2.4	2	-0.4	3	2.9	-0.1
18	3.1	3.4	0.3	3.9	3.5	-0.4
30	2.8	3.2	0.4	3.3	3.2	-0.1
Mean	3.08	3.23	0.15	3.70	3.53	-0.18

Note: A higher score shows greater school involvement.

Results for emotional connections. Table 6 shows the average scores for the group of students with Individual Education Plans (IEPs) and the group of general education students for the questions pertaining to emotional connections. The average difference between the pre-test scores and post-test scores of students with IEPs was 0.2. The average for general education students was -0.13. The students with IEPs had a mean increase of 0.4 points for questions 20 and 36, and there was also a mean increase of 0.2 points for questions 1, 4, and 5. General education students had a mean decrease of 0.5 points for question 4.

Table 6

Results for Emotional Connections

Question #	Pre (IEP students)	Post (IEP students)	Difference (IEP students)	Pre (Gen. Ed)	Post (Gen. Ed)	Difference (Gen. Ed.)
1	3.4	3.6	0.2	4.4	4.6	0.2
4	2.8	3	0.2	4.1	3.6	-0.5
5	3.8	4	0.2	4.7	4.5	-0.2
20	2.6	3	0.4	3.8	3.5	-0.3
24	3.1	2.9	-0.2	4	4.1	0.1
36	3.8	4.2	0.4	4.6	4.5	-0.1
Mean	3.25	3.45	0.20	4.27	4.13	-0.13

Note: A higher score shows greater emotional connectedness

Results for school value. Table 7 shows the average scores for the group of students with Individual Education Plans (IEPs) and the group of general education students for the questions pertaining to school value. The difference between the pre-test scores and post-test scores of students with IEPs was -0.1. The average for general education students was -0.2.

Table 7

Results for School Value

Question #	Pre (IEP students)	Post (IEP students)	Difference (IEP students)	Pre (Gen. Ed)	Post (Gen. Ed)	Difference (Gen. Ed.)
25	3.7	3.6	-0.1	4.4	4.2	-0.2

Note: A higher score shows greater school value

Results for comfort in this school. Table 8 shows the average scores for the group of students with Individual Education Plans (IEPs) and the group of general education students for the questions pertaining to comfort in this school. The difference between the pre-test scores and post-test scores of students with IEPs was 0.3. The average for general education students was -0.05. Students with IEPs had a mean increase of 0.7 points for question 6. This was the largest increase of any question.

Table 8

Results for Comfort in this School

Question #	Pre (IEP students)	Post (IEP students)	Difference (IEP students)	Pre (Gen. Ed)	Post (Gen. Ed)	Difference (Gen. Ed.)
3	2.1	2	-0.1	2.9	2.8	-0.1
6	3.1	3.8	0.7	4.2	4.2	0
Mean	2.6	2.9	0.3	3.55	3.5	-0.05

Note: A higher score shows greater comfort in this school

Table 9 shows the average difference for each category for the results for the students with IEPs as well as the results for the general education students. The students with IEPs had the highest difference in the questions that related to comfort in this school. Their mean score for these questions increase 0.3, indicating that their feelings of comfort in school increased after the 6-weeks implementing DDMS strategies into their class. They had the lowest difference in the questions that related to peer connections at school, with an average difference of -0.13, indicating that their feelings about peer connections decreased. General education students had the largest change in the

questions related to valuing school, with a difference of -0.2. This result indicates that their feelings about valuing their school decreased. Overall, students with IEPs had positive changes in 5 out of 7 categories, while general education students had positive changes in only 1 out of 7 categories.

Table 9

Average Difference Organized by Category

Category	IEP Average Difference	General Education Average Difference
Negative Connectedness	0.12	0.08
Connection with adults in school	0.06	-0.16
Peer Connections at school	-0.13	0
School involvement	0.15	-0.18
Emotional Connections	0.2	-0.13
Value School	-0.1	-0.2
Comfort in this school	0.3	-0.05
Mean Difference	0.09	-0.03

Chapter 5

Discussion

This study examined the effects of implementing the *Developmental Designs for Middle School (DDMS)* program on the school connectedness of students with and without special needs in a seventh grade inclusion class in a middle school in a suburban community in southern New Jersey. Of the twenty-three participants in the study, 10 were students with special needs who were eligible for special education services and had individual education plans (IEPs). Of those 10 students, four qualified for IEPs under Other Health Impaired, four qualified under Multiply Disabled, and two qualified under Specific Learning Disability. The other thirteen students were general education students.

The literature on student connectedness consistently suggests that the extent to which students feel a connection to their school is related to positive social, psychological, and academic outcomes. However, there is not as much research on programs that build students' school connectedness. This study analyzed *DDMS*, a program that claims to do just that.

The research questions to be answered were:

3. Does the implementation of the Developmental Designs for Middle School program in 7th grade classrooms increase students' feelings of connectedness and students' perceived belongingness?
4. Does the DDMS program improve the school connectedness and perceived belongingness of 7th grade students with disabilities?

The results indicate that after six-weeks of implementing various DDMS strategies into the classroom, feelings of connectedness towards school, peers, and adults within the school community slightly increased for students with IEPs, with the largest change coming in feelings of comfort in this school. For general education students, however, the results show that their feelings of connectedness went down slightly or remained the same.

The strategies that we used for this survey will continue to be used for the remainder of the school year, because the felt that the atmosphere of the classroom changed. Although this is not measurable in the survey, both co-teachers of this group of participants noticed a change in the participants. The students seemed to talk to a larger variety of their peers, rather than only their group of friends. They also took ownership of their work and seemed to be more involved in their collaborative projects. After the students created a class-constitution and decided what behavior was expected and acceptable within the classroom, negative behavior became a non-issue. The more the students became involved in the organization and structure of the classroom, the more invested they were. While all of that is great, the goal would be to continue these strategies and improve student connectedness.

Previous Research

In a study conducted by Terrance Kwame-Ross, Linda Crawford, and Erin Klug (2011), results indicated that there is a positive relationship between the number of teachers in a school who are trained in the Developmental Design approach and that school's adequate yearly progress (AYP) status. The practices within DDMS are

designed to help teachers create a classroom and school environment that encourages strong relationships and engagement in school. The aspects of DDMS meet middle school students' needs by allowing them to feel connected, heard, empowered, and safe. DDMS focuses on implementing developmentally appropriate practices and content, building social-emotional skills, responding to rule-breaking, motivating students to achieve academically, intervening with struggling students, creating inclusive learning communities, and building a strong, healthy adult community. The DDMS program states that in order for students to have optimum success, teachers and administrators not only need to carefully orchestrate students' intellectual climate, but their social climate as well. The survey results and classroom observations from this study seem to support the idea that the implementation of DDMS activities increases students' feelings of connectedness and perceived belongingness. The activities appear to help teachers facilitate academic as well as social climate within the classroom, which has a positive impact on feelings of connectedness.

Limitations

All of the students in the current study also participated in *Community-Building Advisory: Circle of Power and Respect (CPR)* for 18 minutes on a daily basis, starting the previous year (when they were in sixth-grade). The CPR advisory meetings provide students with a transition from home/the neighborhood to school. The meetings are structured to meet adolescent needs, promoting social development, facilitating positive involvement among teachers, administrators, and students, providing adult advocacy, and providing a positive climate in the school community. The advisory times are used to foster healthy relationships among peers and between students and teachers, teach social

skills, and build an inclusive community that supports students' connection to school and academic success.

Considering that the students who participated in this survey are 7th graders and have participated in the *CPR* program since they began 6th grade (one entire school year and 4 months earlier), they are somewhat familiar with the ideals and strategies that were implemented into the classroom. The *DDMS* program has been part of their daily school routine since they transitioned to the school as 6th graders. Therefore, the strategies implemented into the classroom for this study may not have impacted them as much as it would have for students with no prior *DDMS* experience. Also, their feelings of school connectedness may have been strong to begin the study since they have spent a year already trying to strengthen it.

A more accurate measure would have been to survey incoming 6th graders before they begin the school year, and then survey them mid-year and/or at the end of 6th grade to see if the *CPR* program as well as the activities implemented into the classroom increased their feelings of connectedness.

Another issue that arose during this study was time, specifically, whether or not the strategies were implemented in the classroom for a long enough time period to get an accurate measurement of school connectedness. Since the students had some experience with *DDMS* strategies because of the *CPR daily advisory meetings*, it did not take long for them to adjust and get involved with the activities. However, if it were possible to implement the activities for a longer period of time and then take the post-survey, the growth might be greater.

It would also be recommended to do a post-survey with the participants about their feelings on the implemented activities. The survey used for this study specifically focuses on feelings of negative connectedness, connections with adults in school, peer connections at school, school involvement, emotional connections, how the students value school, and comfort in this school. It should also survey the students on their feelings towards the various *DDMS* strategies that were implemented in the classroom.

Practical Implications

The students in this study already participate on a daily basis in the *DDMS* morning advisory program. Using their advisory program of 18 minutes per day, students are offered a consistent, dependable opportunity to get to know themselves and each other, build social skills, warm-up their brains in a variety of challenging and relevant ways, and to have fun while doing all of this. Since the students have participated in the *DDMS* advisory program for one entire school year plus six months, it may have had an impact on the students' perceived belongingness and connectedness prior to the start of this study. Informal observations by the co-teachers of this class after implementing the *DDMS* classroom strategies showed students seeming to have more open-mindedness when working on group projects, more willingness to take risks in class, stronger connections between students and their peers as well as students and the teachers.

Based on the survey results, as well as the informal observations of the teachers, *DDMS* is a worthwhile program to implement in order to improve feelings of school connectedness and feelings of belongingness.

Conclusion

Youth spend the majority of their day in school, and it is where their identities and values are often shaped. When students feel connected to their school and have a perceived belongingness, they become more invested and committed to their school. Strong connections with adults and peers are important to students' overall health, as caring and supportive relationships can lead to students making more positive decisions. Because of the added stresses of middle school, it is particularly urgent for middle school educators to improve school connectedness.

Developmental Designs for Middle School (DDMS) is a program that uses practices that integrate social and academic learning and is based on the belief that student success relies on a mix of social skills, good relationships, and being engaged with their learning. The practices within DDMS are designed to help teachers create a classroom and school environment that encourages strong relationships and engagement in school. The aspects of DDMS meet middle school students' needs by allowing them to feel connected, heard, empowered, and safe. DDMS focuses on implementing developmentally appropriate practices and content, building social-emotional skills, responding to rule-breaking, motivating students to achieve academically, intervening with struggling students, creating inclusive learning communities, and building a strong, healthy adult community. The DDMS program states that in order for students to have optimum success, teachers and administrators not only need to carefully orchestrate students' intellectual climate, but their social climate as well.

The findings of this study indicate that the implementation of the Developmental Designs for Middle School program in 7th grade classrooms may increase feelings of connectedness and perceived belongingness for general education students as well as students with disabilities. DDMS strategies within the classroom, as well as the advisory meetings, is a program that should be further studied and looked in to as a resource for increasing school connectedness for middle school students.

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