

DIFFERENCES IN ACADEMIC ACHIEVEMENT AND ACADEMIC SELF-
CONCEPT BASED ON INTELLECTUAL ABILITY, GRADE RETENTION, AND
SPECIAL EDUCATION STATUS

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ABSTRACT

DIFFERENCES IN ACADEMIC ACHIEVEMENT & ACADEMIC SELF-CONCEPT

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There are a variety of factors that may impact a child's ability to perform academically and to develop a strong academic self-concept. This study looked at how intellectual ability, grade retention, and special education placement impact academic achievement and academic self-concept. Students with borderline intellectual ability (IQ between 70 and 85) referred for special education assessment and referred students with an average intellectual ability (IQ between 90 and 110) were administered the Multidimensional Self-Concept Scale (MSCS: Bracken, 1992) and the Basic Achievement Skills Inventory (BASI, 2004) in random order. Student records were used to obtain grade retention and special education information. Pearson correlation and multiple Independent Samples T-Tests were run to analyze the impact of IQ, Special Education placement, and grade retention on academic achievement and academic self-concept. Limitations of the current study and implications for future research will be discussed.

Differences in Academic Achievement and Academic Self-Concept Based on Intellectual Ability, Grade Retention, and Special Education Status

Education is an important aspect of every child's life. There are a variety of factors that may impact a child's ability to achieve academically and therefore develop a strong academic self-concept. Some of these factors include intellectual ability, placement in special education services, and grade retention.

Students with borderline intellectual ability often have different educational experiences than students with average intellectual ability. Research has shown that students with borderline intellectual ability struggle in academic settings, which can lead to negative consequences including limited academic progress and lower self-concept (Cooter & Cooter 2004; Masi, Marcheschi, & Pfanner 1998). Lower academic achievement and lower self-concept have also been shown to be factors related to grade retention and special education placement (Shaw, 2001). Very little research has focused on the impact of grade retention and special education placement on students with borderline intellectual ability.

REVIEW OF LITERATURE

Borderline Intellectual Ability

There are several different terms used to classify students of borderline intellectual ability, including the term “slow learners” (Shaw, Grimes, & Bulman 2005). The term borderline intellectual functioning comes from the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision, which defines it as an individual with an IQ in the range of 71-84 (American Psychiatric Association, 2000). Borderline intellectual functioning is an Axis II V code meaning it is not considered a mental disorder by the American Psychiatric Association but instead can be used as a clinical focus (Shaw, Grimes, & Bulman 2005). In the late seventies, Dunlap (1979) defined slow learners as individuals with an IQ in the range of 70-90. More recently, psychometrics has been used to define students with borderline intellectual ability, or slow learners, as having an IQ falling in the range of 70-85 (Cooter & Cooter 2004). Shaw (2001) noted that the 70-85 IQ range when placed on the normal curve represents fourteen percent of the population. In comparison twice as many students are diagnosed with Attention Deficit Hyperactivity Disorder (ADHD) and an equivalent number of children qualify for special education.

Educational Impact of Borderline Intellectual Ability

Academic difficulties. Students who have been identified as having borderline intellectual ability or as slow learners often struggle academically. Cooter and Cooter (2004) raised the concern that the gap that many slow learners fall into is that after assessment for special education services they fail to meet the criteria for a learning

disability due to the fact that using a discrepancy model there is usually not a significant discrepancy between their ability and achievement. In addition, since their IQ is above 70 they are also not eligible for special education services under the category of mental disability. Instead, these slow learners are placed back into the regular classroom and expected to perform at a level equivalent to the other average to above average students in the classroom. This limited ability to perform academically becomes more of a concern when considering high stakes testing. High stakes testing is a term that is used to describe end-of-grade tests, or standardized tests administered to students, which have either significant rewards or sanctions. For many slow learners their performance on high stakes testing results in failure and grade retention (NCSPA, 2005).

Dunlap's (1979) research showed that slow learners are often expected to achieve at a level that is above their intellectual ability without any remedial help. When it comes to high stakes testing and competency tests, those with an IQ of 70 and below are considered to have mental retardation and receive special education services. However the child with an IQ of 71, who does not have a learning disability and receives no special education services, is expected to pass tests at the same level as a child with an IQ of 100 (Dunlap, 1979).

Shaw (2001) looked at a population of seventy-six slow learners and how they did on high stakes testing. The results showed that only four percent passed all three components of the test, eight percent passed two components, and eleven percent passed one component of the test. This study showed that only a small percentage of slow learners are actually able to meet the standards of high stakes testing. In addition, seventy-six percent of slow learners failed all three components of the test.

Cooter and Cooter (2004) reported that teachers have shown concerns that slow learners lack an awareness of the future and as a result tend to focus on the tasks at hand and struggle with their long term planning skills for future assignments or tasks. Along with having difficulty with long term planning, research has also shown that slow learners retain less information than the average student (Shuell & Keppel, 1970).

Risk for dropping out. A growing concern in schools today is the increasing rates of students who drop out of school. Research has shown that of ten factors related to placing a student at risk for dropping out, such as IQ, reading ability, socioeconomic class, and average grades obtained were correlated. Many of these factors are applicable to most if not all slow learners (Thomas, 1954). Manzo (2005) supported these factors by identifying specific risks found in sixth grade students that would help to predict who would drop out of school before graduating high school. Students with low attendance rates, poor behavior, or failing grades in reading and math were identified as having the most significant risk factors related to which students will graduate and which are more likely to drop-out.

Research has shown that slow learners are at a greater risk of dropping out. Cassel (1988) looked at the relationship between rates of drop-out, non-learners, and self-esteem. The slow learner who has a low self-esteem, with little academic, psychological, or social support at home or school, has no reason to succeed and for that reason will drop out. Shaw (2001) found that within his study, seven of the nine slow learners who turned sixteen during the study dropped out of school. Although the numbers are small, the ratio of slow learners that dropped out of school suggests that slow learners may be at a high risk of dropping out.

Behavioral difficulties. Among other concerns for students identified as slow learners due to borderline intellectual ability is their tendency to display rule-breaking behaviors. A few statistics from Shaw (2001) showed that fifty-four percent of the 76 participants in his longitudinal study involving slow learners were sent to the principal's office for disciplinary problems, seven percent were expelled for weapons or drug related crimes on school grounds, and twenty-eight percent were involved in fighting or bullying. On average both parents and teachers rated slow learners higher on the Behavior Assessment System for Children (BASC) in measures of aggression, attention problems, and conduct disorders compared to their same age peers.

Other studies have tried to explain the relationship between disruptive behaviors and poor academic achievement. Johnson, McGue, and Iacono (2005) developed four hypotheses:

1. Disruptive behaviors lead to achievement difficulties
2. Achievement difficulties lead to disruptive behaviors
3. Each leads to the other
4. The associations result from underlying common causes.

They found that each of their hypotheses were true for different individuals. Some students achieved poorly due to their displays of disruptive behaviors and/or inattention. In other cases disruptive behaviors and inattention were due to low achievement ability. They recommended that the relationship between achievement difficulties and disruptive behaviors be considered through more of an ecological perspective: the lack of emotional support at home, genetics, lack of cognitive stimulation, and school or home environments.

Koolhof, Loeber, Wei, and Pardini (2007) conducted a study with four hundred and twenty-eight participants examining the relationship between delinquent behaviors and intelligence. The study showed that students with a lower IQ displayed more delinquent behaviors when compared to students with average to above average IQ. When delinquents with both high and low IQs were compared, participants with lower IQs performed more delinquent behaviors more frequently that were more serious and they displayed more impulsive behaviors than those with a high IQ. Koenen, Caspi, Moffit, Rijkskijk, and Taylor (2006) had a similar study and found that antisocial boys had an IQ eleven points lower than non-antisocial boys. For boys, lower IQ was predictive of more antisocial behaviors overtime than boys with a higher IQ. Antisocial girls showed an average IQ five points lower than non-antisocial girls, but there were not significant differences between the numbers of antisocial behaviors long term.

Risk for grade retention. There have been several studies that have looked at risk factors for grade retention, as well as the consequences of grade retention. Shaw (2001) showed that within his three-year study regarding seventy-six slow learners, forty-seven percent were retained at least once and sixteen percent were retained twice. Shaw's research showed the risks involved for slow learners and grade retention. Because slow learners have lower academic achievement and often fail to meet standard competency measures, they are often retained.

Blair (2001) looked at the risk factors for two hundred and twenty African American students. The research showed that there were many factors that contributed to the risk of grade retention with low IQ being one of them. However, those children with a low IQ and a high risk background, defined as having small size at birth, limited

stimulation at home, low IQ and high externalizing behaviors, were at an increased risk of being retained. The study separated slow learners into various groups and found that students with an IQ of 75 were ten times more likely to be retained than a child with an IQ of 85.

Social and emotional difficulties. Other research has focused on the relationship between low IQ and social desirability. Crandall (1966) looked at social desirability in relation to several different traits, including IQ. Crandall administered the Children's Social Desirability scale to seventy-six tenth grade students and one month later gave the California Psychological Inventory. Results showed that students with low IQ had social desirability rates of three and four; which were the two lowest ratings given to students.

Shaw (2001) looked at teacher opinions of slow learners. Teachers were asked to give five words that described slow learners. Ninety-seven percent described slow learners as being unmotivated, fifty-six percent described them as being the most difficult to teach, eighty percent reported that they spend less time engaging slow learners than high functioning students in their classrooms, and seventy-two percent reported that working with high achievers is more rewarding than working with slow learners. This study showed that not only are slow learners having trouble socially with their peers but teachers have a more negative perception.

Among other concerns for students with borderline intellectual ability is increased risk for development of low self-esteem/self-concept. Students with borderline intellectual ability struggle academically, which can create a weak self-perception and over time lower their self-esteem and increase feelings of inadequacy (Masi, et. al 1998).

Alves-Martins, Peixoto, Gouveia-Pereira, Amaral, and Pedro (2002) looked at self-concept and its relationship to academic achievement. The purpose of their study was to look at what strategies are used to protect self-esteem when a student faces negative consequences in school. There were eight hundred and thirty-eight participants in seventh, eighth, and ninth grade classes ranging in age from thirteen to nineteen years old with an average age of fourteen. This study was conducted in Portugal. Alves-Martins et al. used a multidimensional model to look at self-concept and obtained both global and academic self-concept measurements. Their results showed that there were significant differences shown within the self-concept of seventh grade students. Alves-Martins et al. concluded that academic results play a vital role in the self-concept of younger adolescents. Their study also showed that low achieving students scored significantly lower than high achieving students in school competence and behavior domains. This research supports the notion that slow learners will have a lower academic self-concept than average achieving students

Factors Related to Academic Achievement

New federal laws, such as *No Child Left Behind*, have emphasized the academic success of all students (Shaw, Grimes, & Bulman 2005). Because of the focus on all students, the new federal laws also apply to students in special education. This raises concerns in regards to the academic achievement of slow learners and grade retention. Research has shown that while retention is often used as an intervention, it is not effective and some students show declines in their achievement (Silberglitt, Jimerson, Burns, & Appleton 2006).

Relationship between placement in special education and academic achievement.

Pijl and Pijl (1998) conducted a meta-analysis of research that compared students in regular education to students who had been placed in special education. The special education students included in this study were classified as having a learning disability or as having mild mental retardation. The meta-analysis was done because of concerns many parents had about placing their students in segregated settings and teachers' concern of having students who qualified for special education in their regular classroom. The results showed that the major difference between students in regular education settings and students in special education settings was academic achievement as well as overall IQ scores. There were considerably lower average IQ scores seen in students classified as educable mentally retarded when compared to students with a learning disability. This was explained by the emphasis on IQ as a determining factor for special education placement. Therefore because IQ is used to determine placement into special education Pijl and Pijl (1998) concluded that IQ and academic achievement are strongly correlated. They also advocated that the majority of students with learning disabilities would be able to succeed in the regular classroom with some help better than a secluded setting. However the students identified as educable mentally retarded would more than likely struggle to succeed in the regular classroom at a level that could even be compared to students of average intelligence and would show greater achievement being placed in a special education setting.

Other research has focused solely on the academic achievement of students in special education. Hanushek et al. (2002) did a longitudinal study that looked at the effects of special education programs on students in fifth grade. Hanushek et al. used a

population of seven hundred and sixty-seven thousand, seven hundred and sixty three students in Texas and looked at achievement based on disability type in three consecutive fifth grade cohorts. The types of disabilities that were considered included learning disabilities, speech impairments, and emotional disturbances. Each student in the study took the Texas Assessment of Academic Skills (TAAS) each spring, which determined mastery of grade requirements. The results showed that special education had a positive effect on student's academic achievement. The study found that with one year of special education services the achievement gap can be closed by three to four percentile points which is approximately one-tenth of the average achievement gap between students in special education and regular education.

Student placement has been shown to be an important concern. Freeman (2000) conducted a meta-analysis on the research concerning academic achievement with regards to several different placement types. The first comparison made looked at achievement between children with mental retardation and children who did not have mental retardation. Both groups of students were in the general education classroom. The results showed that children with mental retardation performed at a lower level. The second comparison looked specifically at students with mental retardation in special education placement compared to students with mental retardation in the regular classroom. The meta-analysis showed there was a more positive effect on achievement in students in the regular classroom. Given these results Freeman looked more specifically at the placement in regular education as being either full inclusion or only being included in the regular classroom for part of the day. Results showed that students with mental

retardation achieve higher the more they are integrated into the regular classroom rather than segregated in a special education class.

Belmont and Belmont (1980) conducted a study to compare slow learners and students with a learning disability. They looked at the differences between students who fail longitudinally and students who just showed short-term cognitive delays through three different studies. By compiling the results of the three studies, they looked at student reading achievement from kindergarten to sixth grade and found that there were four different categories that slow learners and students with a learning disability could be placed into, including, 1) students who show chronic failure, 2) students who perform poorly early but later show improvement, 3) students who achieved early and failed later and, 4) students who showed achievement fluctuations throughout elementary school between failing and average achievement. Based off of these four categories, they concluded that the same intervention or special education program is not going to be effective for every student and that the students who chronically fail, the slow learners, often need constant and long term assistance in the classroom.

Contrary to the aforementioned research, other researchers have focused on the ineffectiveness of special education programs. There are some that view special education settings as a “dumping ground for kids deemed ‘unteachable’” and that inclusion is the only option. Inclusion advocates describe the perception of teachers towards children with severe mental retardation to be the least teachable (Lipsky & Gartner, 1987). These advocates against special education view the services as a way for schools to obtain more money and for parents to lobby for their children to receive special services.

Other findings showed that resource rooms were more effective than regular classrooms for making gains in academic achievement for students identified as educable mentally retarded. However, students who were close in achievement to students within the regular setting, benefited more from being in the regular setting (Madden & Slavin, 1983). Their research was inconclusive regarding the effectiveness of students in both resource and regular settings; however, it was stated the effectiveness would depend largely on the programs being used.

Relationship between grade retention and academic achievement. In the past decade there have been a lot of changes regarding the federal education laws. *No Child Left Behind* has required high-stakes tests, named after their significant rewards or consequences, be given in order to hold school districts, teachers, and students accountable for improved academic achievement. Often these high-stakes tests are used as a single criterion to determine grade retention (NCSPA, 2005). Retention is often used as an intervention method in order to prevent future failure (Silberglitt et al., 2006). It has been argued that high-stakes tests are not a good measure of student's academic achievement and should therefore not be the only criterion to consider when determining grade retention (NCSPA, 2001).

Daniel Safer (1986) conducted a study that looked at the risks of grade retention in elementary school as well as middle school. Safer used data obtained from the cumulative folders of two hundred eighth and ninth grade students looking at academic, socio-emotional, and behavioral information. His study showed that most students retained in elementary school had a below average IQ with low academic achievement whereas the retention of students in middle school was mostly due to classroom

misconduct and absenteeism. Safer also discussed within his article the research findings that with one elementary school grade retention, the risk of that student being retained in middle school increases fivefold. With increased rates of grade retention, the risk of a student dropping out before he or she graduates high school increases as well.

Silbergliitt et al. (2006) investigated the effects of grade retention on reading performance. This study included one hundred and forty-seven students in first through eighth grade enrolled in schools across Minnesota. His study emphasized using a control group and randomly selected participants. Participants were in one of three groups, which included retained, promoted, and a randomly selected control group. Within the group of students who had been retained, he looked at the achievement the year following retention, as well as the longitudinal academic achievement of retained students compared to the promoted and control group. The results showed that the year following retention the students who had been retained made academic gains. This was attributed to the fact that the students were already starting at a higher point than at the beginning of the year before and therefore were going to gain after an extra year within the same grade. For this group of students retention was used as an intervention method in order to improve achievement; however when he looked at the rate of growth from year one to year two there were no differences and concluded that retention was not an effective intervention in order to improve academic achievement. Over an eight-year period he found that there was not a significant difference in overall achievement between the retained students and the promoted students. However in the seventh and eighth year the retained students began to show a decrease in academic achievement while promoted students continued to make consistent progress. These results show that a more

longitudinal study should be conducted to look at the effects of early grade retention on the academic achievement in high school.

Other research completed by Silbergitt et al. (2006) looked at whether the timing of grade retention made a difference in academic achievement. This study included forty-nine students in kindergarten through eighth grade, half who were retained early on in grades kindergarten to second, and the other half in grades third to fifth. Reading curriculum-based measures were used in order to determine achievement of retained students. The results showed that over the eight-year period there were slight differences in students who were retained early compared to students who were retained later; however the difference was not significant. Therefore, one can conclude that early retention is not any more or less effective than retention later on during a student's academic career.

Bowman (2005) looked at a compilation of research that examined whether grade retention was a help or hindrance to student's academic success. Factors of grade retention that were examined included different policies, the cost of retention, the effect of increased academic standards and alternatives to retention. Bowman found that researchers who oppose retention, base their opposition on the cost of retention, including financial, academic, and self-esteem. Concerning academic achievement, Bowman found that over a period of two to three years, student achievement was not any better when compared to their academic achievement when they were first retained. In fact, their academic outcomes were poorer than their peers in the general population who qualified to be retained but were not.

Lenarduzzi and McLaughlin (1992) conducted a study that looked at the longitudinal effects of non-promotion, also known as retention, on academic achievement and attendance. Their study included eighteen students, seven in a control group (promoted), and eleven in the experimental group (non-promoted). All students were tracked through both their middle and high school years. The results showed that there were no significant differences between the two groups in both grade point average and attendance. The mean grade point average across both groups decreased from 1.23 to .66 in four years. The average number of days absent across both groups increased from approximately fifteen days to one hundred and four. However given that thirty-six percent of the students who were promoted and forty-two percent of the students not promoted dropped out before the end of the study, the results were skewed.

Factors Related to Self-concept/Self-Esteem

Self-concept has been defined as how much people value themselves (Baumeister, Campbell, Krueger, & Vohs 2003). Bracken (1992) defined self-concept according to seven different features (Shavelson, Hubner, & Stanton, 1976). The first is organization. Bracken views organization as the conceptualization one has of his or her successes and failures, which reinforce his or her behaviors. The second feature of self-concept is its multifaceted nature. He described self-concept as having six domains that represent an individual's life: social, competence, affect, academic, family, and physical. These six domains overlap and are interrelated because they affect each other. It is these six domains that are combined together to obtain the global self-concept. The third feature of self-concept Bracken emphasized was the hierarchical structure followed by stability. Because of the organization and multidimensional model, self-concept is seen as being

relatively stable and can only be changed gradually over time. Self-concept also has a developmental characteristic to it. A young child most likely has not been exposed to as many environments and concepts as someone who is eighteen. This means that a young child's domain specific self-concepts have a tendency to be more consistent with each other than someone who is 18. As children are gradually exposed to new environments they are better able to differentiate between the specific domains. The evaluative nature of the scale helps to define self-concept due to the individuals evaluation based on their perception of themselves as well as how an individual feels that other perceive them in varying environments. Thus, Bracken defines self-concept as:

A multidimensional and context dependent learned behavioral pattern that reflects an individual's evaluation of past behaviors and experiences, influences an individual's current behaviors, and predicts an individual's future behaviors...and is an interactive environmental-behavioral construct that is organized according to behavioral principles. (Bracken, 1992, p. 10)

History has shown that the study of self-concept has varied and poses several problems. Some of these problems include the fluctuation of scores with age, as well as the differences seen between genders on different domains. For example, the physical domain has a tendency to be higher for boys than girls (Bracken, 1992, Wilson, 1998). However, Bracken's definition was an attempt to alleviate many of those concerns.

Research often uses self-concept and self-esteem interchangeably; however, self-esteem and self-concept measures can be very different constructs. Manning, Bear, and Minke (2006) examined the differences between self-esteem and self-concept and said that self-esteem is a measure of an individual's overall global self-worth. In comparison,

self-concept refers to both a global self-worth as well as specific domains. While the global self-concept of a child is psychometrically similar to self-esteem, the specific domains give a more complex and detailed understanding of the obtained scores.

(Manning et al., 2006)

Relationship between academic achievement and self-esteem/self-concept.

Baumeister (2003) completed a meta-analysis of the research on self-esteem looking at whether or not high self-esteem causes better performance, success, happiness, and health. Concerning school performance, Baumeister found that high and/or low self-esteem does not have a cause and effect relationship with school achievement. Most studies use a global measurement of self-esteem, which includes many different facets, not just academic achievement (Manning et al., 2006). When global self-esteem was correlated with academic achievement there was a very weak correlation; however, when self-concepts in specific domains were correlated with academic achievement in the same domain, there was a higher correlation (Baumeister, 2003). This study showed that global self-esteem is not correlated with academic achievement. Academic achievement can increase self-esteem but there is a weak correlation between the two. However when the research within the meta-analysis used academic self-concept rather than a global self-esteem measure the results showed that academic self-concept and academic achievement had a stronger correlation.

A study was conducted looking at the self-perceptions of four hundred and twenty four students in third through the sixth grade with IQs in the average range (Leondari, 1993). The students were placed into one of three groups. The first group consisted of students who were classified as being in special education and were pulled out for special

classes part of the day and the last two groups were students in the regular classroom who were split into low achieving and high achieving based on teacher responses. Each student was given the *Perceived Competence Scale for Children*. The results of Leondari's research showed that the students pulled out for the special classes had lower academic self-concepts as well as a lower overall global self-concept when compared to the other low achieving and high achieving groups within the study.

Curtis and Shaver (2001) conducted research on improving slow learners self-esteem. This study's purpose was to show that improving self-esteem would enhance a student's learning of knowledge and concepts. There were two hundred and twenty-five participants who ranged in age from fifteen to twenty-one from British Columbia, Canada. The study hypothesized that by providing positive feedback during difficult tasks the students would have a better self-esteem and in return desire to do better and improve academic achievement, specifically in social studies for this study. While in this particular research design improvements in self-esteem were shown, there is also research that shows there is not a direct link between global self-esteem and academic achievement (Kloomok and Cosden, 1994, Leondari, 1993).

Relationship between special education placement and self-concept/self-esteem.

Several different studies have looked at the relationship between self-concept/self-esteem and students placed in special education. Beck, Roblee, and Hanson (1982) used the *Piers Harris Self-concept* scale to look at the self-concept of students placed in special education compared to students in regular education. The Piers Harris Self-concept scale provides a global self-concept score as well as six domain specific self-concept scores. The results of this study showed that there were no significant differences among both the

global and domain specific self-concepts of students in special education compared to those in regular education.

Contrary to the aforementioned research, Stone and May (2002) studied the accuracy of self-evaluation ratings among students with learning disabilities based off of a comparison between scores obtained from the *MSCS*, and a skills rating survey. There were fifty-two participants with a learning disability and forty-nine students who did not have a learning disability. Each student was asked to complete a “Skills Rating Survey” in the academic domains as well as the *Multidimensional Self-Concept Scale*. Academic self-concept scores were collected on each student from both assessment instruments. The results showed that students with a learning disability had lower academic self-concepts than their peers without a learning disability on both assessment instruments but the differences on global self-concept scores were not significantly different between students with a learning disability and students without a learning disability. The results also showed that despite having a lower academic self-concept when compared to students without a learning disability, the mean academic self-concept score for students with a learning disability was in the average range.

Bear, Minke, and Manning (2002) conducted a meta-analysis in order to look at the self-concept of students with learning disabilities. The analysis included sixty-one studies that included a total of three thousand, five hundred and twenty-three students with learning disabilities and two thousand, two hundred and eighty-eight students with average achievement who did not have a learning disability. Of the students with learning disabilities involved within the studies, sixty point one percent were male and twenty-six point three percent were female. The results showed students with learning

disabilities had an academic self-concept that was lower than students who did not have a learning disability. Bear et al. also looked at the differences within self-concept of students based on grade level as well as gender. The results showed that there were no significant differences between both gender and grade level when looking at students who have learning disabilities. Their research supports the previously mentioned research of Stone and May.

Other research has also shown that the self-concept of students in special education is lower than students in regular education. Cambra and Silvestre (2003) found these results when looking at a group of two hundred and sixty students in a Barcelona school designed to emphasize the integration of students with special needs into the regular classroom. The results showed that the global self-concept of the special needs student was not any different than the global self-concept of students in regular education.

Wiener and Tardif (2004) looked at the academic self-concept of students placed in special education. There were one hundred and seventeen students in fourth through eighth grade that had been identified as having a learning disability near Toronto, Canada. Wiener and Tardif found that students with a learning disability had an academic self-concept lower than that of the average achieving student. They also found that within the sample of students in special education, students who were in inclusive settings fared better and had higher academic self-concepts when compared to special education students in resource rooms.

Other research has also looked at the differences between global and academic self-concepts of students with learning disabilities. Kloomok and Cosden (1994) looked

at what factors provided a more positive global and academic self-concept in students with a learning disability based on social support scales and importance ratings. The importance ratings measured how important students felt specific academic areas were to telling them how they felt about themselves. There were seventy-two students who participated in the study from two southern California school districts. Each student had been identified as having a learning disability, which was defined as a severe discrepancy between intellectual ability and achievement ability. After administering the "*What I am Like*," instrument students were placed into one of three groups based on their global and academic concept scales. Those three groups included having a high global self-concept with a low academic self-concept, a high global self-concept with a high academic self-concept, and a low global self-concept with a low academic self-concept. Kloomok and Cosden (1994) found that the majority of the students tested with learning disabilities had a high global self-concept and a low academic self-concept. The three most significant predictors of global self-concept were perceptions about one's physical appearance, perceptions about social acceptability, and perceived social support. The students with both low global and low academic self-concepts perceived themselves as having the least amount of support from both teachers and parents, while students with both high global and high academic self-concepts perceived themselves as having the greatest social support from teachers and parents.

Ribner (1978) looked at the self-concept of six hundred and thirteen students in New York City who had been placed in special classes for the minimally brain damaged and compared them to students in regular education classes who had been referred or qualified to be in the special classes for minimally brain damaged students. Each student

took a self-concept survey that looked at both school related and general competency issues. The results showed that students in the special classes for the minimally brain damaged scored higher on self-concepts in school related areas than the students not in the minimally brain damaged classes. Overall, Ribner (1978) concluded that special class placement has a positive effect on minimally brain damaged student's academic self-concept when compared to students who qualify for minimally brain damaged placement.

Relationship between retention in grade and self-concept/self-esteem. As previous research has already shown, students with borderline intellectual ability are at an increased risk of grade retention. Pomplun (1988) conducted a study looking at whether retention was better if done during elementary school or later within a student's education. Within the measures used was a self-concept and motivation inventory. There were forty-seven total students from first, second, third, fourth, seventh, and eighth grade classes. The study was completed in a school system in Florida. The study lasted two years and one of the variables observed was the change in self-concept of the students involved. The students were split into one of three groups based on grade: primary which included the first and second grade students, intermediate which included the third and fourth grade students, and secondary which included the seventh and eighth grade students. Within each of the three groups students were placed into one of two experimental groups or a control group. The first were students who were retained before the study had begun, second the students who were on a list to be retained but eventually passed on to the next grade, and third the control group which included students who had never been retained and had never been on the list to be retained. The results showed that the students in the primary level retained group had a stable self-concept over the two

year period. However, the students at the intermediate level who were in both the borderline and retained group showed a steady decrease in self-concept over the two year period while the control group did not show any. The secondary level borderline and retained group also showed decreases in self-concept over the two year period. These results show that grade retention has a significant effect on students' self-concept over time.

Holmes and Matthews (1984) conducted a meta-analysis on the effects of grade retention in elementary and junior high school students. Self-concept was used as a dependent variable in nine of the studies evaluated. The results supported the previously mentioned research (Pomplun, 1988) and showed that students who have been retained had a significantly lower self-concept than students who had been promoted to the next grade.

Within the aforementioned research, there are still numerous questions regarding students with borderline IQ, as well as the impact of special education placement, grade retention and IQ on student's academic achievement and academic self-concept. Despite continued efforts to understand how decisions made at school affect children, there are still many questions.

STATEMENT OF THE PROBLEM

Research has provided some evidence that academic achievement is related to academic self-concept with students who have higher levels of academic achievement also demonstrating higher academic self-concept. In addition, there has been research focusing on the impact of grade retention and special education placement on the self-concept and academic achievement (Baumeister, 2003; Bear, Minke & Manning, 2002; Pijl, 1998), but very little research on how intellectual ability impacts both academic achievement as well as academic self-concept. Most of the research on academic ability and academic self-concept has involved children with average intellectual ability.

With the exception of one article (Beck, Roblee, & Hanson, 1982), the research has shown that students in special education settings have a lower academic self-concept when compared to students in the regular education setting (Bear, Minke & Manning, 2002; Stone & May, 2002; Weiner & Tardif, 2004). However, Ribner (1978) showed that when students with minimal brain damage and low academic achievement were compared in different settings, the students in the special education setting had higher academic self-concepts. It was hypothesized that the special education setting functions as an intervention for the student's self-concept.

Some of the variance seen in the research on self-concept in special education students is related to whether a self-esteem scale or a multidimensional self-concept scale was used. Baumeister (2003) showed that within his meta-analysis when academic self-concept was used as a variable rather than global self-esteem, the correlation between self-concept and academic achievement was stronger. Given the variance in the use of

self-concept and self-esteem in the research, it is difficult to make conclusive arguments concerning the academic self-concepts of students with borderline intellectual ability.

When making decisions about a child's educational services, it is imperative that we understand how intellectual ability, grade retention, and special education placement are related to academic achievement and academic self-concept. This study adds to the research regarding these relationships.

The following hypotheses were tested in this study:

1. Academic self-concept will be lower for those students with lower academic achievement than for those students with higher academic achievement.
2. Academic self-concept for those students with borderline intellectual ability will be lower than for those students with average intellectual ability.
3. Academic achievement for those students with borderline intellectual ability will be lower than for those students with average intellectual ability.
4. Academic self-concept for those students who have been retained in grade will be lower than for those students who have not been retained in grade.
5. Academic achievement for those students who have been retained in grade will be lower than for those students who have not been retained in grade.

In addition, the following research questions were examined in this study:

1. Is academic self-concept for those students who have been placed in special education lower than for those students who have not been placed in special education?

2. Is academic achievement for those students who have been placed in special education lower than for those students who have not been placed in special education when not considering intelligence?
3. Is academic achievement for those students with an average IQ who have been retained lower than for those students with an average IQ who have not been retained?
4. Is academic self-concept for those students with an average IQ who have been retained lower than for those students with an average IQ who have not been retained?
5. Is the BASI measure of academic achievement a good predictor of academic self-concept?

METHOD

Participants

Participants included twenty-seven students in grades fifth through twelfth at three different schools in a small Western North Carolina School District (17 male, 10 female). The sample included 1 fifth-grader, 7 sixth-graders, 2 seventh graders, 3 freshman, 9 sophomores, 1 junior, 2 seniors, and 2 high school participants who did not report their specific grade level. Each participant had previously been referred for an evaluation to determine if he or she was eligible to receive special education services indicating that at some point all of these participants had experienced some level of academic difficulty. However, not all of these participants had been found to be eligible for special education services.

The participants selected for this study were initially selected based on their level of intelligence. Students with borderline intellectual ability were defined as those having an IQ in the range of 70-85, and students with average intellectual ability were defined as those having an IQ in the range of 90-110. The sample included eleven students with borderline intellectual ability. These students had intelligence quotients ranging from 70 to 85 with a mean of 77.18 and standard deviation of 5.13. Chi-square analyses were analyzed to determine if there is a relationship between age and whether or not a student is categorized as borderline intelligence or average intelligence. Analyses indicated that the results are not significant. Results did indicate that the minimum expected cell frequency assumption was not met, resulting from a small sample size. Sixteen students with average intellectual ability were included in the study with intelligence quotients

ranging from 90 to 107 and a mean of 98.94, and standard deviation of 5.72. The small sample size obtained prevented the examiner from completing specific comparisons between these two groups that had initially been planned. The comparison between the two identified groups of borderline and average students excluded the involvement of students with an IQ below 70, between 86 to 89 or above 110.

Records showed that of the twenty-seven participants, twenty-one were placed in special education and twenty students had been retained at least one grade within their academic career. See Table 1 below for information regarding how many participants were placed in special education and how many were retained in grade based on intelligence.

Table 1

Special Education and Retention Sample Sizes

Independent Variable	Borderline Intelligence	Average Intelligence
Placed in Special Education	8	13
Not Placed in Special Education	3	3
Retained	11	9
Not Retained	0	7

Measures

School Records. Data regarding intellectual ability and special education placement was provided by the school system in an excel data file that had been kept by

the School Psychologist for the past fifteen years. This data was also used to select participants for the study. Data regarding grade retention was obtained on each student who participated in this study by reviewing information within their cumulative files.

Multidimensional Self-Concept Scale (MSCS; Bracken, 1992). This is a 150 item questionnaire designed to measure global self-concept as well as six domain specific self-concepts including, Social, Competence, Affect, Academic, Family, and Physical. Each of the domains consists of 25 items on a scale similar to the Likert format with responses ranging from “Strongly Agree” to “Strongly Disagree.” A raw score is calculated for each of the domains and is then transferred into a standard score with a mean of 100 and a standard deviation of 15. The MSCS was normed on a sample of 2,501 children in grades fifth through twelfth ranging in age nine to nineteen. Concurrent validity studies show that the MSCS, when compared to the Piers-Harris Children's Self-concept Scale and the Coopersmith Self-Esteem Inventory, was correlated with measures of $r=.85$ and $r=.73$. The MSCS also reports internal consistency coefficients for each domain as follows, social .90, competence .87, affect .93, academic .91, family .97, physical .92, and global .98. Test-Retest reliability show correlation coefficients after a posttest 4 weeks later as follows, social .79, competence .76, affect .73, academic .81, family .78, physical .81, and global .90. For this study, the Academic Self-Concept domain was the only area measured. In the current study the Cronbach alpha coefficient was .85.

Basic Achievement Skills Inventory: Verbal Survey Test (BASI; Bardos, 2003) The Verbal Survey Test is a twenty-five minute timed test that assesses verbal abilities in the areas of vocabulary, language mechanics, and reading comprehension. Scores are reported as standard scores with a mean of 100 and a standard deviation of 15. The BASI

was normed on a sample of more than four thousand students in grades three to college based on the 2000 U.S. Census demographic information. The BASI Survey was developed and is part of the BASI Comprehensive test. The BASI Comprehensive was created using a test specification matrix, which was developed and refined by using the Model Curriculum and Assessment Database. This database is comprised of information from local, state, and national education standards from U.S. schools. Validity studies show that the Total Verbal BASI survey score, when compared to various subtests of the Wechsler Individual Achievement Test-Second Edition was correlated with measures of $R=.73$ for Word Reading, $R=.76$ for Reading Comprehension, $R=.72$ for Pseudoword Decoding, and $R=.89$ for Reading Composite. The BASI reports internal consistency coefficients ranging from .75 to .94 depending on age. Test-Retest reliability show a correlation after a posttest four weeks later of $R=.63$. In the current study, the Cronbach alpha coefficient was .85.

Procedures

Prior to beginning research, submissions were made to the Institutional Review Board for approval. Following IRB approval, the school psychologist in this school system assisted in selecting the participants for this study by providing a copy of the testing Excel data file with all student names replaced by an identification number. Based on the participants having an intelligence quotient between 70 to 85 and 90 to 110, a list of identification numbers was formulated as potential research participants. There were 198 students identified as possible research participants. The identification numbers were sent to the school system's School Psychologist. The School Psychologist then mailed parent consent forms (attached in Appendix A), made phone calls to parents who

did not respond through mail, and met with parents who came to the school in order to obtain consent. After obtaining consent from parents, the researcher had access to student names, and cumulative folders.

On the day of the assessments at each school, students with completed consent forms were called to the front office of each school. Students were escorted in a group by the researcher to an empty classroom and seated at separate desks. Students were informed of the research and their voluntary participation. Students at this point were allowed to leave if they did not want to participate. Of the participants involved within the study, one student did not participate. In a random order, materials were passed out to each student. Following the standardization of each assessment instrument, students completed the MSCS and BASI Verbal Survey Test. After completing both assessments, students were dismissed to return to class. Following the completion of the group-administered assessments, student cumulative folders were accessed in order to determine grade retention information. In addition, information regarding intelligence scores, and special education placement was obtained from the School Psychologist's assessment Excel data file.

RESULTS

Consent for participation in this study was obtained from parents of 28 students out of the 198 potential participants identified. This represented a 14% response rate. Only one of these twenty-eight students refused to give assent leaving a total of twenty-seven participants. This sample size was much smaller than had been hoped, limiting significantly the hypotheses that could be considered and analyses that could be run. Specifically, it was not possible to consider the impact of borderline intelligence and retention or borderline intelligence and special education placement on academic achievement and academic self-concept. With the data available, it was decided that the hypotheses that could be considered were those related to the relationship between academic achievement and academic self-concept, intelligence and academic achievement; intelligence and academic self-concept; academic achievement and academic self-concept; educational placement and academic achievement, educational placement and academic self-concept, retention and academic achievement; and retention and academic self-concept.

These relationships were examined by using Pearson product-moment correlation coefficients, multiple regression, and independent samples t-tests. For the independent samples t-tests, the dependent variables included the standardized scores obtained from the MSCS (academic self-concept) and the BASI (Verbal Skills). The independent variables included special education placement, grade retention, and intelligence quotients. Pearson product-moment correlation coefficients were not calculated for grade retention and special education placement because the data is categorical.

Academic Self-Concept and Academic Achievement

The relationship between academic self-concept and academic achievement was investigated using Pearson product-moment correlation coefficient in order to determine if there was a positive correlation between the two variables. Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity, and homoscedasticity. The results from the analysis show that there is a significant medium positive correlation between the two variables ($r=.42$, $n=27$, $p=.015$), with higher academic achievement associated with higher academic self-concept.

A multiple regression was conducted to determine if academic achievement was a significant predictor of academic self-concept. Multicollinearity, outliers, normality, linearity, homoscedasticity, and independence of Residuals assumptions were all met. R square equaled .176; indicating 17.6 percent of the variance in academic self-concept is explained by the student's academic achievement. Due to the small sample size, R square may be an overestimation of the true value; therefore, the adjusted R square value was examined as well. Adjusted R square equaled .143; indicating 14.3 percent of the variance in academic self-concept is explained by the student's academic achievement. Standardised Beta was reported at .42 at $p=.03$ significance

IQ and Academic Self-Concept

An independent-samples t-test was conducted to compare the academic self-concept scores for students with a borderline IQ and students with an average IQ. Assumptions were met according to the Levene's Test for Equality of Variances, and equal variances were assumed. Results indicated a significant difference in scores for

borderline students ($M=77.82$, SD 6.29) and average students ($M=94.50$, SD 13.26) at $p=.001$ significance, $t(25)=-3.87$. The magnitude of the differences in the means was very small ($h^2=.088$), 8.8% of the variance in academic self-concept was explained by IQ. See Table 2 below for analysis results.

Table 2

Academic Self-Concept of Borderline and Average Intelligence

Intelligence Level	Sample Size	Academic Self-Concept Mean	Standard Deviation
Borderline IQ	11	77.82	6.29
Average IQ	16	94.50	13.26

IQ and Academic Achievement

An independent-samples t-test was conducted to compare the academic achievement scores for students with a borderline IQ and students with an average IQ. Assumptions were met according to the Levene's Test for Equality of Variances, and equal variances were assumed. There was no significant difference in scores for borderline students ($M=77.82$, SD 11.55) and average students ($M=85.81$, SD 10.25) at $p=.070$ significance, $t(25)=-1.89$. The magnitude of the differences in the means was very small ($h^2=.022$), 2.2% of the variance in achievement was explained by IQ. See Table 3 below for analysis results.

Table 3

Academic Achievement of Borderline and Average Intelligence

Intelligence Level	Sample Size	Academic Achievement Mean	Standard Deviation
Borderline IQ	11	77.82	11.55
Average IQ	16	85.81	10.25

Retention and Academic Self-Concept

Due to the population of borderline students having all been retained in grade, retention analyses were examined only for students with average intelligence. Within this population, nine students had been retained in grade at least once and seven students had not been retained in grade. An independent-samples t-test was conducted to compare the academic self-concept scores for students with an average IQ who have been retained in grade with students who have an average IQ who have not been retained in grade.

Assumptions were met according to Levene's Test for Equality of Variances, and equal variances were assumed. There was not a significant difference in academic self-concept scores for students retained in grade ($M=91.11$, $SD14.90$) and students not retained in grade ($M=98.86$, $SD10.19$) at $p=.26$ significance, $t(14)=-1.17$. The magnitude of the differences in the means was very small ($h^2=.089$) 8.9% of the variance in academic self-concept was explained by whether or not a student was retained. See Table 4 below for analysis results.

Table 4

Academic Self-Concept of Students with Average Intelligence Retained in Grade and Students with Average Intelligence Not Retained in Grade

Variable	Sample Size	Academic Self-Concept Mean	Standard Deviation
Retained	9	91.11	14.90
Not Retained	7	98.86	10.19

Retention and Academic Achievement

Due to the population of borderline students having all been retained in grade, retention analyses were examined only for students with average intelligence. Within this population, nine students had been retained in grade at least once and seven students had not been retained in grade. An independent-samples t-test was conducted to compare the academic achievement scores for students with an average IQ who have been retained in grade with students who have an average IQ who have not been retained in grade.

Assumptions were met according to Levene's Test for Equality of Variances, and equal variances were assumed. There was not a significant difference in academic achievement scores for students retained in grade ($M=86.89$, $SD 6.97$) and students not retained in grade ($M=84.43$, $SD 13.93$) at $p=.65$ significance, $t(14) = .46$. The magnitude of the differences in the means was very small ($h^2 = .015$) 1.5% of the variance in academic achievement was explained by whether or not a student was retained. See Table 5 below for analysis results.

Table 5

Academic Achievement of Students with Average Intelligence Retained in Grade and Students with Average Intelligence Not Retained in Grade

Variable	Sample Size	Academic Achievement Mean	Standard Deviation
Retained	9	86.86	6.97
Not Retained	7	84.43	13.93

Special Education Placement and Self-Concept

An independent-samples t-test was conducted to compare the academic self-concept scores for students who have been placed in special education with students who have not been placed in special education. Assumptions were met according to Levene's Test for Equality of Variances, and equal variances were assumed. There was not a significant difference in academic self-concept scores for students placed in special education ($M=86.48$, $SD 12.47$) and students not placed in special education ($M=92.00$, $SD 17.84$) at $p=.39$ significance, $t(25)=-.87$. The magnitude of the differences in the means was very small ($h^2=.004$), .4% of the variance in academic self-concept was explained by whether or not a student received special education services. See Table 6 below for analysis results.

Table 6

Academic Self-Concept of Students Placed in Special Education and
Students Not Placed in Special Education

Variable	Sample Size	Academic Self-Concept Mean	Standard Deviation	Range
Placed	21	86.48	12.47	55-106
Not Placed	6	92.00	17.84	66-116

Special Education Placement and Academic Achievement

An independent-samples t-test was conducted to compare the academic achievement scores for students who have been placed in special education with students who have not been placed in special education. Assumptions were met according to Levene's Test for Equality of Variances, and equal variances were assumed. There was not a significant difference in academic achievement scores for students placed in special education ($M=80.90$, $SD=11.66$) and students not placed in special education ($M=88.33$, $SD=8.36$) at $p=.16$ significance, $t(25)=-1.45$. The magnitude of the differences in the means was very small ($h^2=.012$), 1.2% of the variance in academic achievement was explained by whether or not a student received special education services. See Table 7 below for analysis results.

Table 7

Academic Achievement of Students Placed in Special Education
and Students Not Placed in Special Education

Variable	Sample Size	Academic Achievement Mean	Standard Deviation
Placed	21	80.90	11.66
Not Placed	6	88.33	8.36

DISCUSSION

This research study provided information regarding the impact of intellectual ability, special education placement, and grade retention on the academic achievement and academic self-concept of students' who have a history of academic difficulties. Despite a small sample size, the information obtained from this research study should provide school systems with important student factors to consider when making decisions regarding educational interventions. It also supports the need for continued efforts to examine these relationships.

Implications for Achievement and Academic Self-Concept

The most notable implications from this study are the academic self-concept findings. Analyses showed that students with a borderline IQ had a significantly lower academic self-concept when compared to other students with an average IQ. Other research supports these findings, Masi, et. al (1998) found that students with borderline intellectual ability struggle academically, which can create weak self-perception and over time lower their self-esteem and increase feelings of inadequacy. A medium, but significant correlation supports the relationship between academic achievement and academic self-concept of students. This indicates that students with borderline intellectual ability are performing lower academically which is impacting the way students perceive themselves academically. Results also indicated a significant regression, signifying that student achievement is a predictor of academic self-concept.

This significant regression is especially important considering that most of the students within the average IQ group still performed below average academically. As

noted, all students within this evaluation had previously been referred for testing to determine eligibility for special education; however, many were not eligible. Despite having average intelligence and below average academic achievement, students with an average IQ still had a significantly greater academic self-concept within the average range when compared to students with borderline intellectual ability. Given the significant difference in academic self-concept between students with borderline IQ and those with average IQ but no difference in academic achievement, it raises the question, what is increasing the academic self-concept of students with average intelligence, but not for students with borderline intellectual ability?

From these results, one can conclude that by improving student achievement, especially students with borderline IQ, one can improve their academic self-concept as well. However; previous research and the current results are inconclusive regarding the effectiveness of programs used to improve student achievement.

Implications for Special Education Placement

Research has been inconclusive regarding the effectiveness of special education programs. Within the current study, the lack of a significant difference between students with academic difficulties who are placed in special education and those who are not placed in special education in terms of both academic self-concept scores and academic achievement scores indicates that special education within this small district is not making a significant impact in these two areas. However, the same can be said for the regular education program. While the mean achievement score for students placed in special education (80.90) was lower than the mean academic achievement score for students not placed in special education (88.83), this difference was not significant. This

indicates that students placed in special education are doing no better and no worse than students with academic difficulties who were not placed in special education. What is not known is whether there was a significant difference in academic achievement and academic self-concept between these two groups when they were initially referred for testing. Without that information it is hard to compare the progress of one group compared to the other. The small sample size for this study also prevented the examiner from looking further at the impact of level of intelligence on the academic performance differences between students placed in special education and those placed in regular education.

Implications for Grade Retention

Most notable within the sample of students with borderline IQ, is that every student had been retained in grade at least once. Research supports the negative impact retention has on both student's academic self-concept and academic achievement (Pomplun, 1988 and Silberglitt et al. 2006). Retention could be a confounding variable to the previously asked question regarding the differences in academic self-concept among students with borderline IQ and students with average IQ. Despite students with average intelligence having below average academic achievement, they were still able to have an academic self-concept within the average range, which is not the case for students with borderline IQ. This could possibly be explained by the research supporting the negative impact retention has on student's academic self-concept.

Due to the small sample size and having no students with borderline IQ who had not been retained, only students with average intelligence were used within analyses to determine the impact of grade retention on academic self-concept and academic

achievement. Results indicated that there was not a significant difference between the academic achievement and academic self-concept scores of students with average intelligence who had been retained in grade when compared to students with average intelligence who had not been retained in grade. This indicates that retaining in grade students who are having academic difficulty does not result in significantly improved academic performance or academic self-concept over time.

Implications for Future Decisions

The current research supports the continued efforts to examine the decision making process regarding special education placement and grade retention of students. Grade retention is often a subjective, rather than objective decision made within schools with limited criteria or data to support these decisions. Given the current model of special education within North Carolina, decisions for special education placement continue to be based on discrepancies among intelligence and achievement rather than a district and school's ability to intervene and attempt to pull a child back up to grade level within the general education setting. However, states continue to be in a transition between the use of the discrepancy model and the Responsiveness to Instruction (RTI) model when making decisions regarding special education eligibility. This transition creates a change in decision making processes, as well as a change within both the general education and special education settings. Within RTI, schools are able to set up learning environments for students within the general education setting that allow students to receive differentiated instruction and instruction on their level, without the label of a disability or the idea of being retained in grade. Given the previous research, RTI would also increase students academic self-concept. By improving students'

academic achievement, and providing interventions within a regular education setting, academic self-concept should increase as well.

Limitations

There are several limitations to the conclusions within the previously reported analyses, particularly the small sample size. The small sample size impacts the effect size, despite meeting the assumptions for both correlations and t-tests. There were no students with a borderline IQ who had not been retained a grade limiting the ability to generalize the findings regarding retention. The majority of participants were also placed in special education regardless of intelligence. The small number of students in this study who were in regular education classrooms further limits the generalizability of these results.

A self-selection bias was also present within the present study and sample of students. Ideally, participants within this study would have been a randomly selected group of students with borderline and average IQ. However, only students who took home and returned consent/assent forms were allowed to participate. Self-selection bias impacts the reliability of the results.

Given the information required for this study, all participants within the study had previously been referred for a psychological evaluation. This indicates that the majority, of students, if not all, have experienced academic difficulties at one point in time during their academic career. Despite having average intelligence, within this study, they could also have a learning disability that would impact their academic achievement and academic self-concept.

This particular study focused on achievement in the area of reading. However, for many students reading could have been a strength and their disability was in math or writing. The particular academic difficulty of students could have impacted the results of the previous analyses.

When considering the impact of special education placement on academic achievement and academic self-concept, the length of time a student had been receiving special education services was not considered within this study. The length of time a student has been receiving special education services could potentially impact the results.

Within this study, intelligence was considered as a factor impacting academic achievement and academic self-concept. Comparisons were initially proposed to look at the differences between students with borderline intelligence and academic intelligence. However, due to the small sample size, there were limited analyses available to run and analyze. Therefore correlations and t-tests were analyzed. Given the grouping of students, participants did not represent IQ scores across the continuum, which could have impacted the results of the correlations.

Directions for Future Research

Although analyses showed significant results especially in regards to academic self-concept related to academic achievement, IQ and retention, further and more detailed research in this area is still needed. Given the small sample size, a MANOVA could not be run in order to determine significant results when considering how all factors impact academic achievement and academic self-concept. Analyses were run with independent variables collapsed across groups.

Within the small sample size, there were not any students with a borderline IQ that had not been retained. This particular group of students requires further research in order to better understand the impact of grade retention on students with a borderline IQ.

Other variables to consider in future research include the number of years a student has received special education as well as the number of times a student has been retained. In order to truly understand the impact of special education placement, the number of years a student has been receiving specialized instruction should be considered. When considering student placement in special education, there are various disability categories, including, but not limited to, learning disability, and intellectual disability. The specific education placement of a student could also impact their academic achievement and academic self-concept.

As previously noted, the area of achievement assessed could have skewed the results within this particular study. Future research should focus on student achievement in all areas including reading, math, and writing.

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APPENDIX A

Parental Consent Form

Dear Parents:

Swain County Schools are pleased to participate in a research project with Western Carolina University. Your child has been selected to participate in this study. The results will help Swain County Schools better understand how to educate our children. More specifically, this research will look at the relationship between grade retention, special education placement, and intelligence with student's academic self-concept and academic achievement.

Kristin Pruett is a graduate student in the School Psychology Program at Western Carolina University. She will be doing this research beginning in the Fall of 2009. In order to keep your child's name and records confidential, she will not have access to this information unless you sign this consent form.

If you agree to allow your child to be in this study, he or she will be asked to complete a survey measuring their academic self concept as well as take a brief academic achievement assessment. These items will be given at school in a group setting and will take approximately 30-40 minutes altogether. By allowing your child to participate, you are also giving us permission to access your child's cumulative file in order to gather demographic and school related information.

Your child's participation is strictly voluntary. All information will be kept strictly confidential. Your child's name, school, and school district will not be written in any reports and will be known only to me, Catherine Cuthbertson, School Psychologist for Swain County Schools, and Kristin Pruett, the graduate student doing the research. Your child will not experience any harm, stress, or discomfort while participating in the research and can stop at any point.

If you have any questions, feel free to contact me by email at ccuthbertson@swainmail.org, or you may contact Kristin Pruett directly at 828-446-0876 or by email at kepruett1@catamount.wcu.edu. If you have any additional questions regarding your child's rights as a research participant, you may contact the office of the IRB, a committee that oversees the ethical issues of the research process. The IRB office can be contacted at 227-3177. This research project has been approved by the IRB. Please return this form in the enclosed envelope (sealed).

THANK YOU for helping us to help the children in Swain County Schools!

I AGREE DO NOT AGREE (Circle one) for your child to participate

Child's Name: _____ Child's Signature: _____

Parent Signature: _____ Date: _____

If you would like to know the results of the study after its conclusion, please write your email address (preferred) or phone number below. This will only be used for sharing the results of the study with you.

Contact me at: _____