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Classroom pull-out: helping or hurting students' self-concepts and academic success?

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Abstract

It is commonly debated what method of school instruction is best for young students: classroom pull-out for additional resources or inclusion models. There is a vast amount of literature that exists on the topic, however a portion of it is quite conflicting. Some say that inclusion methods are best for students' academic and social needs while others argue classroom pull-out, or resource room, is more beneficial for students' academic performance and self-esteem. The current study provided a possible answer as to the effects classroom pull-out in the third grade has on academic success and self-concepts in the fifth grade. This study asked, "what are the effects of classroom-pull out in third grade on academic and social self-concepts and academic performance in fifth grade?" To answer this question, information from the public-use data file called the Early Childhood Longitudinal Studies Program, Kindergarten 2011 from the National Center for Educational Statistics was used from Child Questionnaires and interpreted through use of linear regressions. Survey questions concerning third and fifth graders' social self-concepts and academic self-concepts were of focus for the present study. Linear regressions were then conducted to determine fifth grade outcomes in terms of academic performance and self-concepts. The results of the data analysis suggested that classroom pull-out for additional resources in the third grade had a negative influence on fifth grade academic self-concept, social self-concept and fifth grade reading and math test scores. Implications including school policy changes are discussed as well as the need and hope to make classrooms an inclusive environment for all types of learners to improve on themselves mentally and academically.

Introduction

A common debate amongst the education community is over whether classroom pull-out for additional resources or an inclusion model is best for students' academic and social needs. Classroom pull-out, also known as "resource room", is explained as a separate classroom where students are given specific, individualized instruction and assistance as individuals or in small groups, typically in areas such as mathematics and reading/language arts, in which students have fallen behind compared to the average grade level in specific disciplines. The inclusion model of teaching would involve special education students, or students qualifying for additional resources, not leaving the regular, general education classroom and instead receiving instruction in the classroom. A large amount of research conducted on the topic suggests various ideas about the efficacy of pull-out methods, especially in comparison to inclusion models. Though there is a great amount of literature on the topic, contrasting ideas concerning this topic are evident which leaves room for additional research to be conducted. Some of the research conducted on this topic suggest that students with special education needs are less likely to like school compared to their peers without special education needs. This idea offers insight on the academic and social self-concepts of children involved in special education programs and pull-out services (McCoy & Banks, 2012). Fitch (2003), offers an alternative idea based off of her study. Fitch suggests that even in an inclusive, traditionalist classroom after having been pulled out for additional resources previously, some students report not feeling as though they belong in this environment, as well as a sense of rejection, shame and embarrassment (Fitch, 2003). The opposing notions on classroom pull-out versus inclusion and its impact on student self-concepts creates need for additional research to be conducted.

Another aspect related to the notion of classroom pull-out is its efficacy on students' academic performance. Conflicting research is evident surrounding the concept of academic performance. Some suggest that students involved in pull-out programs score higher on exams in related areas to the individualized instruction, whereas others offer the idea that students served in an inclusive learning environment score higher on these exams. This gap in the literature provides opportunity for the topic to be studied at greater lengths.

Discussing this topic as well as working on ways to improve either pull-out or inclusion methods is quite significant when it comes to educating our youth and setting them up for a successful academic career and a healthy mindset about themselves and school possibly through secondary education and into adulthood. Increasing conversation and research on the topic of classroom pull-out for additional resources and its impact on school-aged children has potential to help teachers, administration, and parents to understand its significance in shaping students' self-concepts as well as helping to discover ways to limit negative experiences or alternative methods of teaching to all types of learners.

I have read a great deal of literature on the topic concerning the ongoing debate of classroom pull-out and have even witnessed certain effects first hand. All I have learned through research and personal experiences has led me to continue to question teaching methods and be more curious about how educators can work to support all types of learners. To further the discussion on such a significant topic in education, I have focused my research on whether or not classroom pull-out for additional resources is helping or hurting students both in an academic sense as well as mentally, influencings students' academic and social self-concepts. The research question that I have set out to answer is: "What are the effects of classroom-pull out in third grade on academic and social self-concepts and academic performance in fifth grade?" To

investigate this particular question, an existing data set, the Early Childhood Longitudinal Studies Program Kindergarten 2011 study, was analyzed. Data provided from the ECLS-K:2011 study from Spring 2014, when the students were in the third grade, was used to predict fifth grade outcomes concerning social self-concept, academic self-concept and academic performance. After compiling the data and interpreting the results, I was able to find that classroom pull-out for additional resources in the third grade had a negative impact on outcomes measured in fifth grade: social self-concepts, academic self-concepts and academic performance. This research will help educators, parents and caretakers to rethink what mode of instruction may be best for students' needs as well as to further educate teachers and administration on the effects of classroom pullout and allow for work to be done to ensure the classroom is a place for all learners to feel comfortable and confident in their abilities while working to improve upon them.

Literature Review

What do the students think?

Oftentimes decisions regarding children's education are made for them. Parents and teachers typically make the call for whether or not students will participate in remedial instruction, which consequently can have a great influence on factors like self-esteem. It is important to be understanding and cognizant of what children are thinking about matters regarding their classroom placement and school in general. Ideas children form of themselves in regard to school and about school itself likely influence self-concepts for years to come. Researchers questioned whether students' concepts surrounding school as well as school engagement were influenced by having special education needs (SEN). Research suggested that school engagement and concepts had about school are influenced by factors such as school,

family and peers (McCoy & Banks, 2012). Results of a 2012 study showed that students with one or more special education needs were much more likely to indicate never liking school. This was based on asking the students with special education needs the degree to which they liked reading and math as well as by investigating peer relationships. The authors wrote: "It appears that children with learning disabilities face an additional barrier in integrating into school life, a barrier that children with other types of SEN do not appear to experience" (McCoy & Banks, 2012). Information provided from this study shows the possible reason why children with special education needs do not like school which influences self-concepts throughout the child's life.

More literature on the topic of classroom pull-out and students' self-concepts mentions that classroom structure, whether an inclusion model is implemented or pull-out, has an impact on students' confidence and sense of self (Fitch, 2003). Research shows that students who are moved into inclusive classrooms from traditionalist, pull-out practices experienced changes in sense of self. The concepts students had of themselves were highly influenced by their educational setting. Fitch (2003) reports students suggesting that when they were moved into an inclusive classroom they felt they had a more confident and hopeful sense of self. By contrast, students who were involved in a traditionalist classroom expressed a sense of rejection and desire to escape to the special education classroom. Additionally, when students were separated from being in an inclusive classroom to being segregated once again as they moved into junior high school, they reported feeling ashamed and embarrassed. The most important finding from Fitch (2003) is that when students' educational environment was changed multiple times, from traditionalist classroom to inclusive classroom and segregated classes, their sense of self changed as well and their social sense of belonging. This study allows for more research to be done to further understand the influence classroom placement and mode of instruction has and to better

evaluate what method works best for students' needs, not only academically but just as importantly for their self-concepts and mental health.

Similar to what children with special education needs think of themselves, researchers have also questioned what peers' perceptions of students with learning disabilities who participate in pull-out resources are and whether or not these perceptions are different in different grade levels (Rose, Barahona & Muro, 2017). Students in kindergarten, third grade and fifth grade responded to questionnaires and made peer nominations for who in the class was most liked in order for researchers to answer these questions. The results suggested that students who did not receive pull-out services received more nominations of being most liked than those who did receive pull-out services. The results also indicated that students' age played a factor in ratings. It was found that there was a slight increase in the proportion of children receiving pull-out services and being rated as 'most liked' as age/grade level increased (Rose, Barahona & Muro, 2017). This research provides insight into social implications as a result of participating in pull-out services for additional resources which can influence students' self-esteem.

Another study revolving around classroom pull-out for additional resources and what the students themselves think offered some interesting ideas as to what method of instruction students prefer. Klingner, Vaughn, Schumm, Cohen & Forgan (1998), focused on perception had by students with and without learning disabilities on the pull-out or inclusion methods. Researchers asked students who had taken part in pull-out resources and inclusion classrooms which model was most beneficial for academic success as well as for social benefits. It was concluded that overall, students preferred the pull-out method over the inclusion method, although the students with learning disabilities were split pretty evenly in their opinions. Students with a learning disability expressed that getting work done in the general education

classroom was harder than it was when pulled out, however, students felt that there were greater social benefits from inclusion than there were being pulled out.

An additional study that I came across while researching classroom pull-out's effect on self-concept offered ideas about classroom engagement in relation to both sense of self as well as academic performance. Yeh (2010) writes that students' sense of competence and control over their academic environment heavily influences classroom engagement. It was also mentioned that this sense of competence and control is often laid down by the third grade. The study found that children who had higher perceived control had higher levels of engagement (Yeh, 2010). Levels of classroom engagement can also be telling of sense of self, both academically and socially, because students potentially may not be as engaged in the classroom due to lack of perceived control as well as low self-esteem both in terms of academics and socially.

Which method results in greater academic performance?

As stated previously, the debate over which method is best for students exists and is fueled by the question of whether pull-out or inclusion is best for improving students' academic performance. There is an abundance of literature that exists with intentions of proving or disproving that pull-out is effective in terms of test performance. Rea, McLaughlin & Walther-Thomas (2002) set out to investigate what the relationship between placement (pull-out vs. inclusion) and outcome is. In this comparative study, 8th grade students in two different middle schools within one district were assessed. One school implemented inclusion practices for students with learning disabilities (LDs) and the other used pull-out instructional methods for students with LDs. The results of the study indicated that students with learning disabilities served in inclusive classrooms scored significantly higher in all four areas of instruction (language arts, mathematics, science and social studies) than students involved with pull-out

instruction. Researchers also had students take the Iowa Test of Basic Skills after which it was reported that students with learning disabilities in the school where inclusive learning was implemented scored higher on the language and math subtest than the students with LD in the school where students received pull out instruction. However, the two groups scored similarly in areas of reading comprehension, science and social studies (Rea, McLaughlin & Walther-Thomas, 2002). The results of the study also showed that students in the inclusive learning environment had greater attendance than the pull-out group. This particular study offers ideas that inclusive learning environments are beneficial for students' academic needs. However, opposing research exists which is important to acknowledge when discussing this topic.

Differing from the previous study mentioned, Connor et al. (2013) conducted a study in which they set out to find a relationship between classroom pull-out for individualized reading instruction and reading scores. Researchers wanted to know if individualized instruction for one, two or three years (first, second and third grade) would have an effect on reading ability. They were able to find that students who received individualized instruction for reading for three years showed greater reading skills by the end of the third grade (Connor et al., 2013). The results found from this study that differ from the previously mentioned study allow room for more research to be conducted on classroom pull-out's impact on academic performance.

Hypotheses

After conducting a literature review on the topic of classroom pull-out, its effects on self-concepts and its effectiveness in terms of academic performance, it is clear that more research can be done. Reading the literature has led me to ask the question, "what are the effects of classroom-pull out in third grade on academic and social self-concepts and academic performance in fifth grade?" This research intends to further look into whether pull-out is

helping or hurting students' self-concepts and academic success by combing through data and interpreting results to come to a conclusion. Based on what others have said regarding classroom pull-out's effect on students' self-concepts and academic performance, I hypothesize that:

1. Students involved in classroom pull-out for additional resources will have a lower social self-concept.
2. Students involved in classroom pull-out for additional resources will have a lower academic self-concept.

Because of conflicting information gathered from literature on the topic, it is difficult to hypothesize classroom pull-out's impact on academic performance. I would hypothesize that:

3. Students involved in classroom pull-out for additional resources will potentially have lower test scores.

Methods

This research was a quantitative study that used an existing, public-use data set in order to answer the research question. The National Center for Education Statistics (NCES) conducted a longitudinal study known as the Early Childhood Longitudinal Studies Program, Kindergarten 2011, also known as the ECLS-K:2011. The study was conducted throughout the years 2011 to 2016, following 18,174 students from kindergarten to fifth grade. Students involved in the longitudinal study were from both public and private schools and came from diverse socioeconomic and racial backgrounds. The ECLS program provided data at the child-level from child, teacher, parent and administrative assessments and questionnaires. The ECLS-K:2011 studied relationships between child, family, school and community factors and the child's development and learning as well as students' academic outcomes. The ECLS-K:2011 conducted direct cognitive assessments that were designed to measure children's knowledge and skills at

different time points and to track academic growth. Assessments were given in areas including reading and mathematics (Early Childhood Longitudinal Program, 2019).

This study compiled data from the ECLS-K:2011 from the Spring 2014 and Spring 2016. These particular years were when students involved in the study were in the third grade and fifth grade, respectively. The filter variable that was used was if students were involved in classroom pull-out/remedial instruction in the third grade. This sample from the ECLS-K was chosen to analyze in order to answer the research question which focuses on classroom pull-out for additional resources in third grade and its relationship to students' self-concept and academic performance in both third grade and fifth grade.

Dependent Variables

There are four dependent variables included in the present study. The dependent variables concern student self-concept and academic performance. For analytic purposes, self-concept variable has been divided into two more specific areas of self-concept; the first is social self-concept and the second is academic self-concept. In order to measure these dependent variables and their relationship, 64 survey questions were selected from the ECLS-K:2011 Child Questionnaires. Scales were created using principal component factor analysis. Variables chosen to construct each self-concept variable are provided in the Appendix.

The next two dependent variables concerned academic performance. Test scores in the areas of reading and math in third and fifth grade were the dependent variables used to measure academic performance. The ECLS-K:2011 conducted direct cognitive assessments in these two areas. Reading and math were chosen as two of the dependent variables because they are two of the four core academic areas as well as two typical areas for individualized instruction. Reading and math were also chosen because the ECLS-K:2011 provided data on students pulled out for

remedial instruction for math instruction and reading instruction. The four variables chosen to construct academic performance for math and reading in third and fifth grade are provided in the Appendix. There are limitations of the data sample including that variables that are predictive of self-concepts may have been omitted.

Independent Variables

The independent variables included in this study were classroom pull-out for additional resources in third grade, demographic factors including child race, gender, household income and parent education level, and third grade academic and social self-concept. The ECLS-K:2011 provided data on students who were pulled out for remedial instruction for math and reading in the third grade. Variables chosen to construct classroom pull-out for math and reading in third grade are provided in the Appendix. Demographic characteristics such as the four chosen for this study provide information on a range of students which is important for a study in which researchers wish to potentially generalize results. Third grade academic and social self-concept were also included because to predict fifth grade outcomes in these areas, third grade information was needed. Scales for third grade academic and social self-concept were based on principal factor analysis. Limitations for the data sample include that the sample of students may not be entirely representative of all students who are pulled-out of the classroom for additional resources. The demographic information included in this study may suggest that the population sample is not entirely representative of all students.

Data Analysis Strategy

To analyze the data from Child Questionnaires relating to student self-concepts and academic performance, descriptive statistics and linear regressions were completed using the data analysis program STATA. Data from the third-grade questionnaires were used in the linear regressions to

predict fifth grade outcomes. Four different linear regressions were run in order to compile results from the ECLS-K:2011 data; the first with the social self-concept dependent variable, the second with the academic self-concept dependent variable, and the third and fourth with fifth grade reading and math test scores.

After running each of the linear regressions to determine if fifth grade outcomes could be predicted from third grade data, the coefficients, standard errors and statistical significance was considered to determine if a relationship between classroom pullout and other demographic factors and the dependent variables existed. Factors were considered statistically significant if $p<.05$.

Results

Data collection and analysis led to the conclusion that classroom pull-out for additional resources in the third grade had a negative effect on social self-concept, academic self-concept and reading and math test scores in the fifth grade. Descriptive statistics share information about the sample population. Linear regressions were conducted to determine if a relationship exists between the four dependent variables and the various independent variables, with the main focus being classroom pull-out in the third grade. Linear regressions were used to predict third and fifth grade outcomes.

Table 1: Descriptive Statistics

	5th Grade SSC		5th Grade ASC		5th Grade Math Score		5th Grade Reading Score	
	Non-Pullout	Pullout	Non-Pullout	Pullout	Non-Pullout	Pullout	Non-Pullout	Pullout
Gender								
Male	50.42%	52.41%	50.33%	52.16%	50.55%	52.68%	50.56%	52.65%
Female	49.58%	47.59%	49.67%	47.84%	49.45%	48.88%	49.44%	47.35%
Race								
White	52.32%	44.52%	52.13%	44.07%	51.92%	43.64%	51.95%	43.67%

Black	7.86%	11.76%	7.75%	11.81%	7.91%	11.95%	7.91%	11.99%
Asian	33.50%	39.69%	33.81%	40.05%	33.80%	40.25%	33.78%	40.18%
Native American	1.42%	1.11%	1.42%	1.22%	1.40%	1.24%	1.40%	1.24%
Multiple	4.91%	2.91%	4.89%	2.85%	4.96%	2.92%	4.96%	2.91%
Parent Education								
HS or less	34.20%	53.84%	34.24%	53.64%	34.52%	54.02%	34.51%	54.09%
College	47.92%	40.33%	47.98%	40.56%	47.75%	40.30%	47.76%	40.23%
More than college	17.88%	5.83%	17.78%	5.80%	17.73%	5.69%	17.33%	5.69%
Parent Income								
$1-$35,000	27.02%	46.53%	27.11%	46.82%	27.22%	47.47%	27.20%	47.44%
$35,001-$60,000	18.12%	18.87%	18.18%	18.32%	18.30%	18.55%	18.29%	18.54%
$60,001-$100,000	24.26%	18.39%	24.11%	18.58%	24.03%	18.21%	24.04%	18.20%
$100,000+	30.60%	16.22%	30.60%	16.28%	30.45%	15.77%	30.46%	15.81%
Grade 3 Math Score	N/A	N/A	N/A	N/A	110.07 (15.51)	93.16 (16.31)	N/A	N/A
Grade 3 Reading Score	N/A	N/A	N/A	N/A	N/A	N/A	126.09 (13.31)	110.78 (13.91)
Grade 5 Reading Score	N/A	N/A	N/A	N/A	N/A	N/A	141.53 (12.96)	126.03 (14.78)
Grade 5 Math Score	N/A	N/A	N/A	N/A	125.54 (14.83)	109.46 (16.93)	N/A	N/A
Grade 3 Math Self Concept	2.93 (0.86)	2.94 (0.87)	2.93 (0.87)	2.93 (0.87)	2.92 (0.87)	2.93 (0.87)	N/A	N/A
Grade 3 Read Self Concept	3.16 (0.74)	2.90 (0.81)	3.16 (0.74)	2.89 (0.81)	N/A	N/A	3.16 (0.74)	2.89 (0.81)
Grade 3 Social Self Concept	3.18 (0.48)	3.07 (0.53)	3.18 (0.48)	3.07 (0.53)	N/A	N/A	N/A	N/A
N of cases	5,356	1,884	5,492	1,962	5,699	2,091	5,702	2,093

Table 1 presents descriptive statistics concerning the sample population, the dependent variables and the independent variable of classroom pull-out status. The descriptive statistics shed light on which students are involved in classroom pull-out. Across the four dependent variables, it was found that nearly 53% of students involved in classroom pull-out for additional resources were male. The data also shows that of the students involved in classroom pull-out, around 54% were White, about 12% were Black and 40% were Asian. This demographic information is telling of the population from which the sample was taken for the ECLS-K:2011. Additional demographic information includes that about 54% of students who were pulled-out of the classroom had parents who received a high school education or less as well as about 47% coming from households where income was $35,000 or less. The information shown in Table 1 expresses the notion that children from backgrounds of lower socioeconomic status were more likely to be found in remedial instruction classrooms.

Table 2. Regressions for 3rd Grade Outcomes

	3rd Grade SSC	3rd Grade Math ASC	3rd Grade Reading ASC	3rd Grade Math Score	3rd Grade Reading Score
Pulled out in 3rd Grade	-0.06*** (0.01)	-0.003 (0.02)	-0.26*** (0.12)	-14.14*** (0.34)	-12.91*** (0.29)
Gender (ref. Male)					
Female	0.12*** (0.01)	-0.17*** (0.02)	0.25*** (0.01)	-3.60*** (0.30)	3.02*** (0.25)
Race (ref. White)					
Black	0.04* (0.02)	0.27*** (0.03)	0.02 (0.03)	-10.45*** (0.52)	-5.06*** (0.45)
Asian	-0.13*** (0.02)	0.21*** (0.02)	-0.01 (0.02)	-2.61*** (0.35)	-2.34*** (0.30
Native American	-0.08 (0.04)	0.01 (0.08)	0.07 (0.07)	-3.60** (1.29)	-2.80* (1.11)
Multiple	0.01 (0.02)	0.06 (0.04)	0.06 (0.04)	-1.80* (0.72)	-0.09 (0.62)

Parent Education (ref. HS or less)					
College	0.03* (0.01)	-0.05* (0.02)	0.04* (0.02)	3.50*** (0.36)	3.78*** (0.31)
More than College	0.05* (0.02)	-0.05 (0.03)	0.10*** (0.02)	6.80*** (0.52)	6.79*** (0.45)
Parent Income (ref. $1-$35,000)					
$35,001-$60,000	0.04* (0.02)	-0.06* (0.02)	-0.02 (0.02)	3.63*** (0.44)	3.60*** (0.38)
$60,001-$100,000	0.10*** (0.02)	-0.08** (0.03)	0.02 (0.02)	5.93*** (0.52)	5.44*** (0.39)
$100,000+	0.13*** (0.02)	-0.10*** (0.03)	0.00 (0.02)	7.67*** (0.47)	6.92*** (0.40)
N of cases	9,066	8,715	10,077	10,372	10,370
Model R^2	0.07	0.05	0.05	0.32	0.33

*p<.05 **p<.01 ***p<.001

Table 2 shows the results of linear regressions run to predict third grade outcomes for social self-concept, math academic self-concept, reading academic self-concept, math score and reading score based on whether the student was involved in classroom pull-out in the third grade and demographic information. These results indicate some significant relationships between the third-grade outcomes, pull-out status and demographic information. As shown in the first row, students who were pulled out of the classroom for additional resources in the third-grade had a lower math academic self-concept and reading academic self-concept as well as lower test scores for math and reading than students who were not pulled out. These findings are significant for my research because it indicates that pull-out in third grade has a negative impact directly to third graders, which offers an idea of what impact it will have in fifth grade.

The results of linear regressions to predict third grade outcomes also show that gender differences were significant. In comparison to male students, female students had a slightly higher social self-concept (0.12), a slightly lower math academic self-concept (-0.17) and higher reading academic self-concept (0.25). Results also indicate that female students scored lower on math assessment by 3.60 points and higher on reading assessment by 3.02 points. Student race was somewhat significant in predicting third grade outcomes as well. Compared to white students, black students had a higher social self-concept and a higher math academic self-concept. However, black students scored lower than white students on math assessment by 10.45 points and lower on reading assessment by 5.06 points. Asian students also had a higher math academic self-concept but a lower social self-concept and scored lower on math and reading assessments by approximately 2 points in comparison to White students. The results also show that Native American students scored lower on math assessment by 3.60 points and lower on reading assessment by 2.80 points compared to White students.

Table 2 also indicates a relationship and pattern between parent education and household income and third grade outcomes. As parent education level increases, as does social self-concept, reading academic self-concept and test scores. Interestingly, students whose parents received a college education had a lower math academic self-concept compared to student whose parents received a high school education or less by 0.05. In addition, a pattern was found between household income and the dependent variables. As household income increased, third grade social self-concept also increased, and by a higher margin with each income category. The same pattern was observed for math and reading test scores. The results indicate, however, that as household income increases, third grade math academic self-concept drops, also by a greater margin with each increasing income category.

Table 3. Regressions for 5th Grade Outcomes

	5th Grade SSC	5th Grade ASC	5th Grade Math Score	5th Grade Reading Score
Pulled out in 3rd Grade	-0.08*** (0.02)	-0.08*** (0.01)	-1.85*** (0.24)	-3.46*** (0.24)
Gender (ref. Male)				
Female	-0.06*** (0.01)	-0.08*** (0.01)	0.72*** (0.12)	-0.95*** (0.20)
Race (ref. White)				
Black	0.21 (0.03)	-0.04*** (0.01)	-2.44*** (0.36)	-1.74*** (0.36)
Asian	0.09*** (0.02)	-0.03*** (0.01)	-0.42 (0.23)	-0.01 (0.23)
Native American	-0.06 (0.06)	-0.08** (0.03)	0.39 (0.81)	-0.42 (0.83)
Multiple	0.01 (0.03)	-0.02 (0.02)	-1.08* (0.45)	0.26 (0.47)
Parent Education (ref. HS or less)				
College	-0.02 (0.02)	0.02 (0.01)	1.11*** (0.23)	1.07*** (0.24)
More than College	-0.02 (0.02)	0.02 (0.01)	1.57*** (0.34)	0.95* (0.35)
Parent Income (ref. $1-$35,000)				
$35,001-$60,000	0.06* (0.02)	0.01* (0.01)	0.86* (0.28)	1.12*** (0.29)
$60,001-$100,000	0.08*** (0.02)	0.05*** (0.01)	1.13*** (0.29)	1.37*** (0.30)
$100,000+	0.15*** (0.02)	0.07*** (0.01)	2.19*** (0.31)	1.70*** (0.31)
Grade 3 Math Score	N/A	N/A	0.79*** (0.01)	N/A
Grade 3 Reading Score	N/A	N/A	N/A	0.74*** (0.01)
Grade 3 Math Self Concept	0.02** (0.01)	0.04*** (0.00)	0.15 (0.11)	N/A

Grade 3 Read Self Concept	-0.01 (0.01)	0.02*** (0.00)	N/A	0.57*** (0.13)
Grade 3 Social Self Concept	0.25*** (0.01)	0.13*** (0.01)	N/A	N/A
N of cases	7,246	7,461	7,793	7,795
Model R^2	0.07	0.12	0.77	0.69

*p<.05 **p<.01 ***p<.001

Table 3 shows the results of linear regressions for fifth grade outcomes. The major findings which directly answer the research question is that pull-out in the third grade for individual instruction had a negative impact on fifth grade social self-concept, academic self-concept and fifth grade reading and math test scores. Students involved in pull-out services in third grade had a lower social self-concept and academic self-concept by 0.08. Math scores of students who were involved in pull-out services dropped by 1.85 points. Reading scores of students who were involved in pull-out services dropped by 3.46 points. The findings from this regression answer the research question and show that pull-out in third grade has a negative influence on fifth grade outcomes for self-concepts and academic performance.

Additional information taken away from the regressions is that females had a lower social self-concept compared to males by 0.06 and lower academic self-concept by 0.08. Females test scores were higher in math by 0.72 points and lower in reading by 0.95 points in comparison to males.

A significant relationship was found between academic self-concept and students who identified as Black, Asian, Native American and multiple races. The results suggest that black students had a lower academic self-concept by 0.04, Asian students had a lower academic self-concept by 0.03, Native American students was lower by 0.08 and students who identified as multiple races had a lower academic self-concept by 0.02 compared to White students.

Results shown in Table 3 indicate a relationship and pattern between parent education level and fifth grade test scores. The data suggests students whose parents received a college education score 1.11 points higher on math assessment and 1.07 points higher on reading assessment. Students whose parents received more than a college education scored 1.57 points higher on math assessment and 0.95 points higher on reading assessment.

In addition to results shown regarding parent education level, household income was also indicative of fifth grade outcomes. A pattern was seen in the data regarding household income and the four dependent variables. Fifth grade students' social self-concept and academic self-concept was higher as household income category increased. Additionally, as household income increased, so did reading and math test scores. Significant findings include that students who came from a household where income was $100,000 or more had a higher social self-concept by 0.15, and a higher academic self-concept by 0.07 compared to students whose household income was $35,000 or less. Also compared to students whose household income was $35,000 or less, students whose household income was $100,000 or more scored higher on math assessment by 2.19 points and higher on reading assessment by 1.70 points.

Results suggest that fifth grade math score was higher than third grade math score by 0.79 points and fifth grade reading score was higher than third grade reading score by 0.74 points. These results indicate growth in reading and math for fifth graders. The results shown in Table 3 also suggest that third grade social and academic self-concepts were influential on fifth grade social and academic self-concepts.

Discussion

This study asked, "what are the effects of classroom-pull out in third grade on academic and social self-concepts and academic performance in fifth grade?" After conducting linear

regressions, it was found that classroom pull-out in third grade has a negative impact on fifth grade social self-concept, academic self-concept and academic performance. Additional findings regarding the influence of demographic information, such as child gender and race, parent education level and household income, on self-concepts and academic performance was also found. The most prevalent patterns expressed by the data was that as parent education level increased, as did fifth grade test scores, and as household income increased as did self-concepts and test scores. Self-concepts and test scores increased by a higher margin as income category increased. These two patterns are understandable given that generally, higher education level indicates higher income. This finding also speaks to the inequality that exists in education. The data from this study further suggests that students of lower socioeconomic status have lower self-concepts and score lower on academic assessments. This information adds to this understood inequality and goes to show that more work must be done in order to begin to bridge the gaps that are evident.

The present study found that classroom pull-out for additional resources in third grade had a negative impact on self-concepts and academic performance in fifth grade. The results of this research confirm hypotheses and are mostly in line with what previous literature states on the matter. In addition to information that was found while conducting the literature review, the quantitative information discovered leads to numerous implications. To begin, my findings emphasize the notion that is mentioned by Fitch (2003), that educational placement greatly influences students' sense of self. With this understood, parents, caretakers and educators can make more informed decisions on which mode of instruction may be best for individual students' academic and social needs.

Other important implications to come from my study concern education policy. With what is understood from the results of my research, education policy can be improved upon. Suggestions for policy change include creating inclusive classrooms that are a positive environment for all types of learners. Students in these inclusive classrooms may benefit from a co-teacher model. With a co-teacher present in the classroom, students will not have to be removed from the classroom but can still receive the individualized instruction necessary (Sailor & Roger, 2005). Co-teachers in classrooms with students who qualify for individual instruction could potentially be certified Special Education teachers. Limitations with this idea exist, however. School funding and the cost of Special Education departments and teachers more specifically can limit this possibility. Policies on classroom pull-out can be altered with more information regarding its effects not only on self-concepts but also on academic performance.

A quote from an article by Yeh (2010) says, "the experience of schooling can be restructured to meet students' psychological need to feel competent, promoting engagement, commitment to work effort and a self-reinforcing cycle of increased achievement." I believe this quote sums up the idea that educational environment influences academic performance greatly and also plays a very significant role in shaping students' sense of self. If "the experience of schooling", or environment we place children in, can be adjusted so as it fits the needs of all students, it is possible negative experiences in school can be limited. With negative experiences limited and positive experiences increased, there is potential for greater academic achievement as well as a boost in students' confidence. If new policies can be implemented so as to make school an environment that can help all students grow to be confident in their abilities and help them improve on these abilities, I am hopeful that more students will grow to love learning and truly value their education.

Appendix

Academic Self-Concept

C7

- CLQ055: "I like reading"
- CLQ065: "I cannot wait to do math each day"
- CLQ085: "I am interested in reading"
- CLQ095: "I cannot wait to read each day"
- CLQ100: "I am interested in math"
- CLQ130: "I like math"
- CLQ 140: "I am good at reading"
- CLQ155: "I enjoy doing work in math"
- CLQ165: "I enjoy doing work in reading"
- CLQ170: "I am good at math"
- CLQ270: "I am happy with my skills and talents" *(both self-concepts?)*

C9

- CLQ620: "I try hard to do well in school"
- CLQ625: "In class, I work as hard as I can"
- CLQ630: "When I'm in class, I participate in class discussions"
- CLQ635: "I pay attention in class"
- CLQ640: "When I'm in class I listen very carefully"
- CLQ660: "This school year, how often did you enjoy being at school" *(?)*
- CLQ670: "I finish whatever I begin"
- CLQ675: "I try very hard even after making mistakes"
- CLQ680: "I continue to work towards my goals, even when they take a long time to complete"
- CLQ690: "I continue working on what I set out to do, even when it takes me a long time to complete"
- CLQ685: "I keep working hard even when I feel like quitting"
- CLQ695: "I keep trying to improve myself, even when it takes a long time to get there"
- CLQ700: "I worry about taking tests"
- CLQ705: "It's hard for me to finish my schoolwork"
- CLQ710: "I feel ashamed when I make mistakes at school"
- CLQ715: "I worry about doing well in school"
- CLQ720: "I worry about finishing my work"

Social Self-Concept

C7

- CLQ030: "I have lots of friends"
- CLQ090: "I get along with kids easily"

- CLQ105: “I am easy to like”
- CLQ120: “Other kids want me to be their friend”
- CLQ135: “I have more friends than most other kids”
- CLQ180: “During the school year, how often have other students teased you, made fun of you, or called you names?”
- CLQ185: “During this school year, how often have other students told lies or untrue stories about you?”
- CLQ200: “During the school year, how often have other students left you out from playing with them on purpose?”
- CLQ205: “I worry about what other kids think of me”
- CLQ215: “I try to cheer up other classmates who are upset or sad about something”
- CLQ220: “I worry that other kids don’t like me”
- CLQ230: “I help out other kids when they need it”
- CLQ235: “I’m afraid other kids will not like me”
- CLQ245: “I say or do nice things for other classmates”
- CLQ265: “I am happy with the friends I have”
- CLQ270: “I am happy with my skills and talents”

C9

- CLQ645: “This school year how often did you feel like you fit in at your school”
- CLQ650: “This school year how often did you feel close to classmates at your school?”
- CLQ655: “This school year how often did you feel close to teachers in your school?”
- CLQ660: “This school year how often did you enjoy being at your school”
- CLQ695: “I keep trying to improve myself, even when it takes a long time to get there” *(both self-concepts?)*
- CLQ725: “Kids in my class make me feel better if I’m having a bad day”
- CLQ730: “I worry about what other kids think of me”
- CLQ735: “I feel lonely at school”
- CLQ740: “Kids in my class let me play with them”
- CLQ745: “I worry that other kids don’t like me”
- CLQ750: “I feel left out at school”
- CLQ755: “Kids in my class make me feel happy”
- CLQ760: “Kids in my class would help me if I hurt myself at school”
- CLQ765: “I’m afraid other kids will not like me”
- CLQ770: “Kids in my class tell me that I’m their friend”
- CLQ775: “I fell alone at school”
- CLQ780: “Kids in my class would help me if other kids were being mean to me”
- CLQ785: “During the school year, how often have other students teased you, made fun of you, or called you names?”
- CLQ790: “During this school year, how often have other students told lies or untrue stories about you?”
- CLQ800: “During the school year, how often have other students left you out from playing with them on purpose?”

Academic Performance

- X7 Reading IRT Scale Score
- X9 Reading IRT Scale Score
- X7 Math IRT Scale Score
- X9 Math IRT Scale Score

- T7 E3A Individual Tutored Reading/Lang Arts
- T7 E3B Individual Tutored Mathematics

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