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Is the Setting Important?: A Systematic Review of Academic Achievement in a Variety of Educational Settings

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Is the Setting Important?: A Systematic Review of Academic Achievement in a Variety of

Educational Settings

By Shannon L. Jeralds

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I. Executive Summary

Abstract

Since the inception of Public Law 94-142, which we now know today as the Individuals with Disabilities Act (IDEA), in 1975, the question of how and where to educate students with disabilities has been constantly examined and re-examined. Students with disabilities have gone from being placed in an isolated area of the school (out of sight, out of mind) to being included in regular education classrooms and being expected to perform at the same level as students without disabilities. This has caused educators and researchers to wonder what is the best educational setting for students with disabilities to be educated, in order for them to be academically successful. Many studies have been undertaken in order to determine the best setting to educate students with learning disabilities. This paper analyzes the results of seven of those studies to determine the impact that the educational setting has on the academic achievement of students with learning disabilities.

Background

The research available yields mixed results as to which educational setting is better for students with learning disabilities to show academic achievement. The age of the student plays a large part in the research when determining which educational setting is most successful. Fidelity in the implementation of settings, such as co-teaching, also impacted whether or not these settings allowed students to be more successful, academically. Because the No Child Left Behind Act (NCLB) and the Every Student Succeeds Act (ESSA) expect students with disabilities to perform at the same level as their peers without disabilities, it is important to determine which educational setting will result in the most academic growth for students with disabilities.

Research Question

What is the impact of different educational settings on the academic achievement of students with Individual Education Plans (IEPs)?

II. Introduction

Background

In 1975, Public Law 94-142 was passed and gave students with disabilities the right to attend the same public schools as other children (Villegas, 2017). With this new legal right came questions about how best to educate students with disabilities. Ask special educators who have been teaching long enough and they will be able to remember a time when the “special ed kids” were relegated to a room in the basement of the school or, at least, away from the main parts of the building where they would be easily seen. Today’s laws regarding special education have come a long way from just stating that these students have the right to attend the same schools and classrooms as their peers without disabilities. Our country has realized that children with disabilities can be held to higher academic standards than was previously thought.

When learning disabilities became a recognized category of disability, the number of students who qualified to receive special education services began to grow drastically (Osgood, 2005). It was no longer appropriate to group all of the students receiving services in the same room. Now, not only were there students with severe disabilities, but the students who were categorized as “learning disabled.” These students have the cognitive ability to learn at the same rate as their peers without disabilities, they just need some additional support in learning to adapt to how their brain processes information. This opened up a whole new world of possibilities when it came to where to teach students with these learning disabilities. No longer did they need to be in a special education room all day. It was determined that, with just a few intensive interventions to help close the gap of achievement, these students could learn in their general education classrooms along with their peers. Thus, began the idea of resource rooms (where students spend a short amount of time learning interventions) and co-taught classrooms (a

general education teacher and a special education teacher share the teaching responsibilities in the general education classroom). Today, with the passage of NCLB and ESSA requiring that students with disabilities perform just as well as their non-disabled peers, it is up to educators, researchers and even policy makers to determine what type of educational setting allows students with disabilities to make the most academic achievement.

Objective

The objective of this paper is to consider relevant research to determine if the educational setting for students with learning disabilities impacted the academic achievement of those same students as compared to students without learning disabilities.

Methods

Due to the initial lack of research found in this area of study, many databases were searched to find articles relevant to the topic. These databases include: EBSCO Host, Google Scholar, ERIC, SAGE Journals, and JSTOR. Likewise, the researcher expanded the initial terms searched from “modified classes” and “parallel classes” to include the following terms: “exclusive education,” “inclusive education,” “special education instruction,” “special education settings,” “replacement resource classes,” “high school resource rooms,” “co-teaching,” and “academic achievement.”

The acceptance of articles for this review was not limited by year, due to the limited number of articles that were located in the initial search. The field of education has not changed so much that articles written in the 1970’s about inclusive education would not be valid. However, articles that focused on inclusive education in other countries, such as Indonesia, were not accepted because the inclusion looks different in those countries as compared to the United

States. It was determined that these articles would not yield comparable results for the research question addressed in this paper.

Articles that discussed the feelings, or perceptions of teachers or students toward inclusive classrooms, co-taught classrooms, or resource rooms were also excluded unless the results addressed the teachers' or students' perceptions about academic achievement in different educational settings. The efficacy of the belief that one educational setting over another will produce greater academic achievement is important to the research question addressed in this paper. If teachers or students believe they will see more academic growth in one educational setting over another, they are more likely to work harder in that setting, in order to see that belief come true. Also, articles that discussed mental health symptoms, such as depression, in students based on their educational setting placement were not accepted because these articles did not relate their findings to any academic achievement, or growth, by those same students.

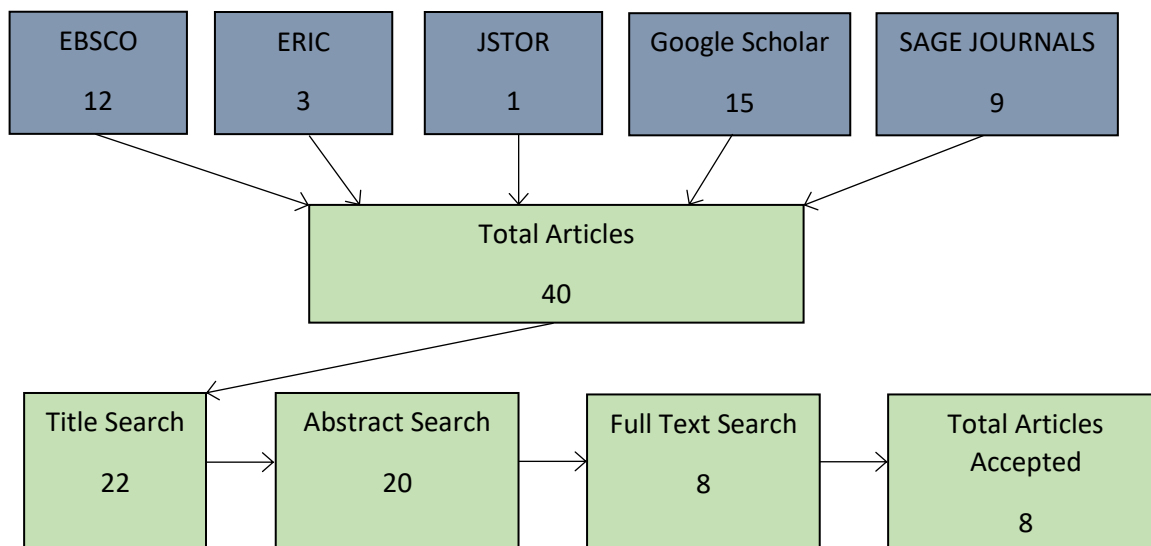
Initially, any articles that addressed students with disabilities were considered for this review. However, the researcher determined that articles addressing students with severe disabilities would not significantly relate to the research question posed in this paper. This determination was based on the fact that many students with severe disabilities do not access the same general education curriculum content as students without disabilities. It was, therefore, determined that only articles discussing students with learning disabilities would be accepted. This included eliminating articles that only addressed the academic achievement of English Language Learners (ELL). These students do not meet the same criteria as students with learning disabilities and they receive a different type of instruction from teachers with different certification than teachers who teach students with learning disabilities.

Articles reviewed that addressed specific intensive interventions used with students with learning disabilities, such as a reading disability, were not accepted if they did not address the educational setting placement of the students involved in the intervention. Knowing whether or not a specific intervention is successful with a student who has a learning disability is helpful in the field of education, in general, but is not relevant to the question posed in this paper.

Any articles that discussed co-teaching were considered at the outset of this research because co-teaching is a highly popular educational setting in today's American public-school system. However, articles that only focused on the importance of collaborative planning or on specific types of co-teaching (e.g. team teaching, parallel teaching, one teach-one assist, etc.) but did not address the academic achievement of students in those settings were not accepted. While there are certain types of co-teaching that are preferred for use in education because it is believed that they are more effective, these articles did not include full studies and were not accepted for the purposes of this research question.

There were forty studies that were initially found with the previously identified key terms. The researcher then reviewed the titles of those forty articles and removed any that were not relevant to the research question. The remaining articles were reviewed by reading the abstracts and determining the relevance to the research question. The full texts of the remaining articles were studied to determine if the articles met the criteria. At the end of this selection criteria, there were eight studies that were accepted for the purposes of this paper because they addressed educational settings of students with learning disabilities in American public schools and what academic achievement was gained by those students in each of the educational settings. Figure 1 shows this selection process.

Figure 1: Systematic Selection Process



Data Synthesis

In the eight studies that were accepted, the results were not all presented with the use of effect sizes. The researcher used a method known as *vote counting* to tabulate results of significant positive, mixed or negative results. Two of the studies were conducted by the same researcher with different co-authors in the same school, but each study focused on different grade levels. Two different studies focused the results on the perceptions of students with learning disabilities regarding their achievement in different educational settings. The results are not directly comparable to the other studies discussed in this paper. However, the input of students, both with learning disabilities and without, when determining the most successful educational setting for academic achievement is extremely important if educators want the cooperation and buy-in of the students in those educational settings.

III. Search Results

Each of the studies used in this paper were unique, but two studies were conducted in the same school. One study focused on the educational setting of fourth graders and the other study focused on the educational setting of fifth graders. In this second study, the researcher was also a classroom teacher of fifth graders. The results of this study were viewed with caution because of the researcher's participation in the study. A control group was not able to be used for many of the studies used in this paper because schools are legally required to provide services to a student immediately upon being diagnosed with a learning disability. A summary of all eight studies is displayed in Table 1.

Table 1: Summary of Eight Accepted Studies

	Study	Educational Setting Analyzed	Data Location	Type of Students	Method
1	Whinnery, King, & Evans. 1995 (Preventing School Failure)	-Traditional Resource Rooms -Co-taught Rooms	-Rural southeastern public elementary schools	-Students with disabilities	-Surveys
2	Klingner, Vaughn, Schumm, Cohen, & Forgan. 1998 (Journal of Learning Disabilities)	-Resource Rooms -Inclusive Rooms	-Unspecified public school in the United States	-Students with learning disabilities -Students without learning disabilities	-Interviews
3	Moody, Vaughn, Hughes, Fischer. 2000 (Exceptional Children)	-Resource Rooms	-Large southeastern public school	-Students with disabilities	-Teacher Interviews -Observations -Teacher Self-Report -Test of Reading Fluency -Woodcock-Johnson: Tests

					of Achievement – Revised
4	Bentum & Aaron. 2003 (Reading Psychology)	-Resource Rooms	-Special Education Cooperative in Midwest	-Students with learning disabilities	-Qualitative -Quantitative -ANOVA
5	Swanson & Vaughn. 2010 (Psychology in the Schools)	-Resource Rooms	-Unspecified southwestern public schools	-Students with learning disabilities	-Purposive sampling
6	Almon & Feng. 2012	-Resource Rooms -Co-taught Rooms	-Unspecified public elementary school in Georgia	-Students with learning disabilities -Students without learning disabilities	-Quasi-experimental
7	Witcher & Feng. 2010	-Resource Rooms -Co-taught Rooms	-Unspecified public elementary school in Georgia	-Students with learning disabilities -Students without learning disabilities	-Quasi-experimental
8	Packard, Hazelkorn, Harris, & McLeod. 2011 (Journal of Research in Education)	-Resource Rooms -Co-taught Rooms	-Unspecified metropolitan public high school in a southern state	-Students with disabilities	-Quasi-experimental

The question of which educational setting produces the most academic achievement in students with disabilities has become especially important since NCLB and ESSA have determined that students with disabilities should score proficient on the same standardized test as students without disabilities. Whinnery, King, and Evans (1995) wanted to look at this question from a different perspective. They wanted to know what the students with disabilities, themselves, thought about their performance in different educational settings. They conducted

their study in a rural, southeastern area of the United States. They used three forms of a survey to have students assess their feelings and perceptions about themselves, their classmates' and teachers' attitudes towards them, and their opinion on the special education services they were receiving. The surveys were delivered, with a set of standardized instructions, to the schools. Participating schools were given three weeks to administer and return the surveys. The survey items were read out loud to the students, in order to account for any reading disabilities the participating students may have had.

A second study of student perceptions of resource rooms was conducted in the United States by Klingner, Vaughn, Schumm, Cohen, and Forgan (1998). The researchers did not disclose the specific location of these participating students. However, they expanded on the Whinnery, King, and Evans study of 1995 because they included the perceptions of students without learning disabilities in this study, as well as students with learning disabilities. The students in this study were in three different elementary grades and half of them had learning disabilities and half did not, but all of them had spent at least one school year placed in a classroom that participated in pull-out and inclusive models. The students with disabilities were evenly divided in their participation in pull-out services versus inclusion. The students interviewed were asked specific questions regarding their perceptions about which setting helped students learn better and which setting had harder work.

The majority of studies that have been conducted, though, have focused on specific data relating to the actual academic achievement of students with disabilities, not just the student perceptions of academic achievement. Moody, Vaughn, Hughes, and Fischer (2000) did this by looking specifically at reading instruction in resource room settings. The researchers had no input in the classroom placement of the fifty-nine students who participated in this study. Data

was collected over the entire school year. The teacher interviews, observations and self-reports did not include information relating to academic achievement. The reading fluency test that was used in this study was administered six times throughout the school year. The comprehension subtest of the Woodcock-Johnson: Tests of Achievement – Revised was given to students at the beginning and end of the school year. This allowed for comparisons throughout the year of student progress, as well as at the beginning and end of the year.

Bentum and Aaron (2003) decided to study the long-term effects of students receiving services in a resource setting. They collected data over a six-year period, using both qualitative and quantitative data. The qualitative data was obtained by interviewing teachers who taught students with learning disabilities. The Analysis of Variance (ANOVA) procedure was used to synthesize data for significance over the course of the six-year period in the areas of reading achievement, spelling and IQ scores.

Swanson and Vaughn also studies reading instruction in resource room settings in their 2010 study. They used purposive sampling to identify the schools that would meet criteria to participate in their study. The study included four southwestern elementary schools that met minimum standards on the state reading assessment, had a resource room delivery model for instruction of students with learning disabilities and the school population was aligned with the district's ethnic diversity.

Another educational setting that is used in many states across the country to help teach students with learning disabilities is co-teaching. Almon and Feng, in their 2012 study, compared results of co-taught classes with solo-taught classes at the fourth grade level. The students in each of these classes were taught from the same lesson plan and given the same test at the end of a unit. The students with learning disabilities were provided their accommodations, as required

by law, and the general education teacher is the same teacher for the solo-taught class and the co-taught class. This allowed for consistent delivery of the instructional material to both classrooms, with the only difference being the addition of the co-teacher in one class. The students were pre-assigned to the classrooms by the school and the researchers had no input into the class selection.

Feng expanded the research of the previous study by also analyzing data from fifth grade co-taught and solo-taught classes in the Witcher and Feng study of 2010. Both classes had the same number of students, and like the fourth-grade study, the school assigned the students to the classrooms without input from the researchers. The general education teacher was the same for the solo-taught classroom and the co-taught classroom. Students in both classrooms had previously scored similarly on unit tests. These two studies have good internal validity, but their external validity may be questioned because the demographic makeup of these classrooms may not be consistent across all public schools in the United States.

The effectiveness of co-teaching and resource rooms at the secondary level have been questioned throughout the years. Packard, Hazelkorn, Harris, and McLeod (2011) conducted a study to determine if these settings were effective in the high school setting. This study took place with ninth graders over a twelve-week period. They used a pre/post test design to compare the results of forty questions taken from a ninth-grade end of course exam for literature. This study had a small sample size so the external validity may not be as good as if a larger sample size had been able to be used.

IV. Results of Previous Studies

The question of placement in different educational settings for students with learning disabilities is an extremely important one and could have ramifications for future policy and law. Many studies have been conducted over the years to study the effects of educational settings on the academic achievement of students with learning disabilities. Eight studies were identified as relating the placement of students with disabilities to their academic achievement. These findings are presented in Table 2.

Table 2: Findings of Eight Accepted Studies

Study	Educational Setting	Significant Positive Findings	Null Findings	Significant Negative Findings
1	Resource Rooms Co-taught Rooms	X	X	
2	Resource Rooms	X		
3 Fluency	Resource Rooms	X		
3 Comprehension	Resource Rooms		X	
4 Spelling	Resource Rooms (after 3 years)			X
4 Word Recognition	Resource Rooms (after 3 years)		X	
4 Comprehension	Resource Rooms (after 3 years)		X	
4 Verbal IQ	Resource Rooms (after 3 years)		X	
4 Performance IQ	Resource Rooms (after 3 years)		X	
4 Full Scale IQ	Resource Rooms (after 3 years)		X	
4 Spelling	Resource Rooms (after 6 years)			X
4 Word Recognition	Resource Rooms (after 6 years)		X	
4 Comprehension	Resource Rooms (after 6 years)		X	
4 Verbal IQ	Resource Rooms (after 6 years)			X

4 Performance IQ	Resource Rooms (after 6 years)		X	
4 Full Scale IQ	Resource Rooms (after 6 years)		X	
5	Resource Rooms		X	
6 Number Sense	Co-taught Rooms Solo-taught Rooms Peer-tutoring Rooms	X	X X X	
6 Division	Co-taught Rooms Solo-taught Rooms Peer-tutoring Rooms		X X X	
6 Multiplication	Co-taught Rooms Solo-taught Rooms Peer-tutoring Rooms	X	X X	
7	Co-taught Rooms Solo-taught Rooms	X	X	
8	Co-taught Rooms Resource Rooms	X	X	

Discussion and Conclusion

The results of the previous research indicate that there is more work to be done in determining which educational setting produces the best academic achievement results. Many of the studies did not result in statistically significant findings no matter which educational setting was being analyzed. However, there were significantly positive results for co-taught rooms more than for resource rooms. This appears to suggest that it is better for the academic achievement of students with learning disabilities to be placed with their peers without learning disabilities. In fact, in one of the studies (study 4), students actually showed significant decreases in spelling after being in the resource room for six years. This suggests that, if resource rooms are going to be used for students with learning disabilities, schools need to hold resource room teachers accountable for implementing curriculum and instruction with high rigor. In this same study, even though they did not show statistically significant decreases, students in the resource room

did have declining scores in all areas that were looked at, except for comprehension, which showed no change.

When looking at all of the studies, only resource rooms showed negative results on the academic achievement of students with learning disabilities. However, two of the studies did actually show significant positive results in the resource room, so the findings are producing mixed results. Another factor that could have been a reason for the mixed results is the age of the students. While both of the studies that produced significantly positive results from the resource rooms were conducted in elementary schools, the study that involved secondary students showed significantly positive results for co-taught classrooms.

Many of the studies took place in southern areas of the United States and should be interpreted with caution due to the demographics of the areas. One of the studies was in a rural area of the country, and it would be difficult to generalize those results to larger cities. Likewise, the studies that took place in metropolitan areas may not generalize to smaller cities or towns. Further research needs to be conducted regarding the rigor and type of instruction that occurs in each of the possible educational settings for students with disabilities. Further research needs to be done at the secondary level to include the results of modified, or parallel, classes because no research was found on these types of classes during the research conducted for this paper. These types of studies would allow more information to be gained for educators to use when determining placement of students with disabilities. It could also inform policymakers' and lawmakers' decisions about what type of educational setting should be required for students with disabilities to make significant academic achievement in their classroom settings.

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