

Effects of Inclusion Classrooms on Academic Achievement of Students with Learning Disabilities and Students in General Education

Sharon Ware

Abstract

The purpose of this study was threefold: (a) to examine the academic progress of students in reading, who have a learning disability in reading, as they transfer from pull-out support services to inclusion services; and (b) to examine the academic progress of general education students in reading, as they transfer from a general education setting to an inclusive setting; and (c) to determine teachers' attitudes toward including children with special needs. The quantitative portion of the study involved two years of Tennessee Value-Added (TVAAS) scores for general education students as well as scores of students with a reading disability. The qualitative portion of this study utilized a modified scale of teachers' attitude toward inclusive classrooms. Participating teachers received a teacher opinion survey that determined teacher attitude toward including students with special needs. The results from this study revealed that most teachers have positive attitudes toward including students with special needs. Approximately 10 elementary school teachers were recruited to participate in the survey. The quantitative portion of the study indicated there were statistically significant differences in scores of general education students as they moved into an inclusive environment. General education students' test scores significantly declined once they were placed in an inclusive setting. However, the finding from this study showed no statistically significant difference in scores of students with a reading disability once they were moved from a pull-out support setting to an inclusion support setting. It is recommended that future research include larger and more heterogeneous participant pools that include race and gender variables.

Effects of Inclusion Classrooms on Academic Achievement of Students with Learning Disabilities and Students in General Education

With inclusion being a present-day, developing teaching practice, continued research is necessary to generate the best results. This study was conducted in hopes of contributing to such research. The main interest in this study was to assess the effectiveness of inclusion support services as compared to support service instruction provided on a pull-out or self-contained classroom basis. Specifically, this study considered the impact of partial inclusion support services on students' academic achievement in reading as measured by Tennessee Value-Added Assessment System (TVAAS). The consideration of these areas, led to the formation of three general questions:

1. In Tennessee public schools where inclusion is implemented, does the academic achievement of students in reading, with learning disabilities in reading vary as they transfer from pull-out services to inclusion services as measured over time by the Tennessee Value-Added Assessment System (TVAAS)?

2. In Tennessee public schools where inclusion is implemented, does the academic achievement in reading of general education students differ as they move from general education to an inclusive setting as measured over time by the Tennessee Value-Added Assessment System (TVAAS)?

3. What factors impact the attitudes of regular education elementary teachers toward including students with disabilities?

The aim of this study included exploring the academic achievement of learners in reading with respect to inclusion support services with a collaborative teaching model. The following chapter is divided into four sections to delineate the exact course of this study. The first section provides the purpose for the study. A description of the school's setting, the composition of the student population, and teaching instruction is also included in the first section. The second section details the materials employed as well as the measures applied in this study. The third section discusses the data collection procedure for each measurement exercised in this study. The fourth section presents the analysis of the data collected for each measure.

This study examined the academic achievements of special education and general education students in a public elementary school located in an urban school district. Additionally, it considered teacher attitude toward inclusion. The school that participated in this study had introduced the inclusion method of instruction to the school for the past two years. The goal of the participating school was to replace all special education students in age-appropriate general education classrooms where students would be able to receive appropriate support services and assessment. Offered to all students on every grade level, this inclusion approach attempted to empower the general education and the special education teachers to work with all students within the classroom setting.

Purpose of the Study

This study examined the success of inclusive classroom settings as compared to self-contained classroom settings. This study also examined Tennessee Value-Added Assessment System (TVAAS) scores of special education and general education students in self-contained, pull-out, or general education settings in fifth grade and assigned to the same inclusion teacher for Grade 6. One hundred and fourth nine students met the above criteria for this study. Cohort 1 consisted of special education students in Grade 6 who received pull-out support services, or self-contained support services in Grade 5 and inclusion classroom support services in Grade 6. Cohort 2 encompassed general education students in Grade 6 who were assigned to a non-inclusion class in Grade 5 and assigned to an inclusion classroom support services in Grade 6. Students in Cohort 1 and Cohort 2 shared a common general education (English Language Arts) teacher and special education teacher. Both teachers simultaneously taught both cohorts. The teachers shared an inclusion classroom for ELA. Additionally, this study also examined teachers' attitudes and their perceptions regarding to the district's inclusion practices.

Variables

Research Question 1. In Tennessee public schools where inclusion is implemented does the academic achievement of students in reading, with learning disabilities in reading vary as they transfer from pull-out services to inclusion services as measured over time by the Tennessee

Value-Added Assessment System (TVAAS)? Research question one is quantitative in nature; it identified which academic setting produced the greatest gains. Therefore, variables included in this study determined if inclusion settings produce an effect on students' academic achievement as measured by the Tennessee Comprehensive Achievement Program.

Research Question 2. In Tennessee public schools where inclusion is implemented does the academic achievement in reading of general education students differ as they move from general education to an inclusive setting as measured over time by the Tennessee Value-Added Assessment System (TVAAS)? Research question is two quantitative in nature; it identified which academic setting produced the greatest gains. Therefore, variables included in this study determined if inclusion settings produce an effect on students' academic achievement as measured by the Tennessee Comprehensive Achievement Program.

Research Question 3. What factors impact the attitudes of regular education elementary teachers toward including students with disabilities? This research question is qualitative in nature. It sought to determine the factor involved in teachers' attitudes toward inclusion.

Method

Instrumentation

This study attempted to determine the impact of partial inclusion support services on students' academic achievement in reading as measured over time on the Tennessee Value-Added Assessment System (TVAAS). In hopes of establishing academic achievement that had conceivably been influenced by the implementation of partial inclusion support services, all academic data were taken from the participating students' existing scores. The researcher examined existing TVAAS data of students randomly selected through coded information to protect students' identities. The research assistant selected students according to their homeroom teacher in an inclusion classroom. With the assistance of the classroom teacher, the research assistant determined whether the students met the classifications to be considered in general education or special education. Students were listed by an identification number. The research assistant created a spread sheet with each student's identification number, demographic information, classroom certification, and test scores. The researcher viewed the spread sheet and selected the first 149 students meeting the requirements and had received instruction in an inclusion classroom setting during the 2012-2013 year as fourth graders and again as fifth graders in the 2013-2014 academic year. The scores of these students were followed, obtained, and analyzed over a period of two years of tests scores.

These participating students were matched according to their homeroom teachers in an inclusion classroom. The researcher examined students' scores with the same homeroom teachers. The students' placements consisted of a common inclusion classroom for homeroom and the same homeroom teacher for reading and language arts. All students diagnosed with a learning disability in reading were eligible to participate in the research. These students shared a common inclusion and general education teacher.

During the 2012 -2013 year as fifth graders, all students with Specific Learning Disabilities in reading had either received pullout support services (resource) or were placed in self-contained

classrooms. In addition, all of the selected general education students during the 2012-2013 school year as fifth graders were in a general education setting. The students selected to participate in this study were placed in a common inclusion classroom for the 2013-2014 school year. The classroom consisted of a special education teacher and a general education teacher collectively teaching English and language arts.

Tennessee Department of Education (2013) reports Tennessee's educational assessments are designed to provide a broad range of related measures of achievement. In general, for many elementary schools to provide a comprehensive assessment of their students' progress of intellectual skills and abilities, they have chosen to use the Tennessee Comprehensive Assessment (TCAP). The Tennessee standardized test is used by elementary schools for three purposes: (a) to describe each student's developmental level within a test area, (b) to identify a student's areas of relative strength and weakness in subject areas, and (c) to monitor year-to-year growth in the basic skills. To determine these goals, this investigator used the educational assessment for each student over a period of two consecutive test years to determine reading achievement (Tennessee Department of Education, 2013).

As stated by the Tennessee Department of Education (2013), TCAP Achievement Test is a multiple-choice test designed to measure students' academic achievement in certain skills in four content areas: reading/language arts, mathematics, science, and social studies. They are further divided into 13 subtests comprising of Vocabulary, Reading Comprehension, Spelling, Capitalization, Punctuation, Usage and Expression, Mathematical Concepts and Estimation, Math Problem Solving and Data Interpretation, Math Computation, Social Studies, Science, Maps and Diagrams, and Reference Materials. For the purpose of this study, the researcher collected reading data to test for literacy, as follows. The reading totals was used to evaluate for literacy and administered in two subtests: (a) Vocabulary and (b) Reading Comprehension. The subtests assessed word analysis, factual meaning, inferential meaning, and evaluative meaning. Students were presented with a word in the context of a short phrase or sentence where students select the answer that most closely represents the same meaning as the given word. The reading comprehension subtest included excerpts from fiction and nonfiction text such as fables, tales, poems, interviews, diaries, and biographical sketches. Students' growth was measured by considering individual's progress on TCAP. Students' growth is measured using the Tennessee Value-Added Assessment System (TVAAS).

Subjects

Ten elementary school teachers at least 18 years of age and certified to teach in a County school district took the survey. Teachers were chosen based on location and convenience for the researcher. Additionally, 149 students attending a county public school, both special education students and general education students, were chosen for the study for the years 2011-2012 and 2013-2014. The demographic make-up of the target school consisted of a school with more than 60% free and reduced lunch, which would classify it as a Title 1 school. The researcher included both males and females in this study as well as both African-America and Caucasian students; the research assistant viewed the spread sheet and selected 149 students which met the requirements and received instruction in an inclusion classroom during the 2012 -2013 academic year as fifth graders and again as a sixth graders during the 2013-2014 academic year.

After district and principal approval, the research assistant asked the principal for approximately 30 minutes to speak to staff at the beginning of the next staff development meeting. The research project was thoroughly explained to the staff by the researcher. The research assistant gave all teachers a link to the survey monkey form. Teacher consent was located at the top of the first page of the online survey. Once participating teachers read the consent page, they took the survey; taking the survey was considered the participant's implied consent. The participants had the options of participating in the study or declining to participate in the study before the study began. This process took place before participation began. Participation involved completing a questionnaire related to including students with reading disabilities in regular education classes, and completing the survey took no more than 3-5 minutes. Due to the anonymous nature of the questionnaire, the researcher considered all responses.

The researcher examined existing (TVAAS) data of students randomly selected through coded information to protect the students' identity. The research assistant selected students according to their homeroom teacher in an inclusion classroom. With the assistance of the classroom teacher, the research assistant determined whether the students met the classifications to be considered as general education or special education students. Students were listed by an identification number. The research assistant created a spread sheet with each student's identification number, demographic information, classroom certification, and test scores. The researcher viewed the spread sheet and selected the first 150 students that met the requirements and had received instruction in an inclusion classroom setting during the 2012-2013 year as fifth graders and again as a sixth graders in the 2013-2014 academic year. The scores of these students were followed, obtained, and analyzed over a period of two years of tests scores.

Participating students were matched according to their homeroom teachers in an inclusion classroom. The researcher examined scores of students with the same homeroom teachers. The students were placed in a common inclusion classroom for homeroom and the same homeroom teacher for reading and language arts. All student participants in this study were certified as special education under the identification of learning disabled. All students diagnosed with Specific Learning Disabilities (SLD) in reading were eligible to participate in the research. These students shared a common inclusion and general education teacher.

During the 2012 -2013 year as fifth graders, all students with SLD in reading had either received pull-out support services (resource) or placed in self-contained classrooms. In addition, all of the selected general education students during the 2012-2013 school year as fifth graders were in a general education setting. The students selected to participate in this study remained in a common inclusion classroom for the 2013-2014 school year. The classroom consisted of a special education teacher and a general education teacher collectively teaching English and language arts.

To clarify, where resource provisions proposed support services to exceptional education students in the special education setting, the partial inclusion philosophy reassigned the support services to be provided in the general education classroom. With the transformation to inclusion teaching approach, special education students were also placed the general education classroom with their support service and special education instructor.

For the purpose of this study, participants were placed into two academic categories: special education students and general education students. A total of two cohorts were documented: two cohorts of students in each of the two academic categories. These cohorts are described as the first and second cohorts. The first cohort moved from Grade 5 through Grade 6, general education students transferring from a traditional general education setting to a partial inclusion support setting. The second cohort moved from Grade 5 through Grade 6 during the period in which their school transformed from providing pull-out support services to initiating partial inclusion support services in the general education classrooms.

Prior to partial inclusion support services being implemented in the school system, special education students received support services in a special education setting with the special education teacher or the special education aide. These same students, although placed in the general education classroom for part of the day, did not receive additional support services while situated in the general education classroom.

Research Procedures

Prior to initiating this research study, the researcher received permission to access the existing Tennessee Value-Added Assessment System (TVAAS) scores of the students from the school principal/superintendent. Participants in this study included both regular education students and special education students (served in inclusion classrooms) and were drawn from a suburban public middle school in Middle Tennessee. At the time of this study, the school had an enrollment of 700 fifth- through eighth-grade students. The demographic makeup of the target school consisted of a school with more than 60% free and reduced lunch, which would classify it as a Title I school. Both males and females were included in this study as well as African-American and Caucasian students. The researcher examined existing TVAAS data of students randomly selected through coded information to protect the students' identity. The research assistant, who is a general education teacher in the school district, selected students according to their homeroom teacher in an inclusion classroom. With the assistance of the special education teacher, the research assistant determined whether the students met the classifications to be considered in general education or special education. Students were listed by an identification number. The research assistant created a spread sheet with each student's identification number, demographic information, classroom certification, and test scores. The researcher viewed the spread sheet and select the first 149 students that met the requirements and had received instruction in an inclusion classroom during the 2012 -2013 year as fifth graders and again as a sixth graders during the 2013-2014 academic year. The scores of these students was followed, obtained, and analyzed over a period of two years of test scores. These scores consisted of archived data. The researcher randomly selected the students from the group of students who met inclusion criteria.

Additionally, a 10-item survey instrument consisting of statements regarding teacher attitude towards inclusion was utilized. The survey was designed as a Likert scale, using the following format: 1. Strongly disagree; 2. Disagree; 3. Neither agree nor disagree; 4. Agree; 5. Strongly agree.

Prior to the survey being administered, the researcher developed an expert panel of five teachers who had at least five or more years of experience in teaching special education and/or inclusion

to review the survey instruments. The five teachers determined the face validity of the survey statements to ensure the survey addressed the intended constructs the researcher intended to measure. Once the expert panel defined the survey as having face validity, the researcher created the survey statements and included a bipolar scaling method using a five point Likert scale. The researcher then piloted the survey with 10 teachers. After the pilot survey, the researcher conducted an exploratory factor analysis using SPSS to verify the content validity and internal reliability of the survey measures. The researcher removed all measures of poor quality and confirmed survey items correctly correlated to measure preferred constructs.

To assess the qualitative portion of this study, the attitudes and perceptions of inclusion support services among general education teachers were evaluated. Participating teachers received a Teacher Opinion Survey to determine teachers' attitudes toward including students with special needs. After district/principal approval, the research assistant asked the principal for approximately 30 minutes to speak to staff at the beginning of the next staff development meeting. The research project was thoroughly explained to the staff by the researcher. The research assistant gave all teachers a link to the Survey Monkey form. Teacher consent was placed as the first page of the online survey. Once participating teachers read the consent page, they began the survey; the researcher considered this act as participants implied consent. Participants had options of participating in or declining to participate in the study before the study began. Teachers selecting to participate in the study were required to provide an e-mail address. This process took place before participation began. The research assistant explained that participation in this study was completely voluntary. Ten elementary school teachers were recruited to participate in the survey. The researcher e-mailed a link to Survey Monkey to participating teachers. One week after e-mailing the initial link, the same link was e-mailed a second time automatically through survey monkey for teachers that did not take the survey. A link was sent to selected teachers automatically a third time. The researcher placed a repeat setting in Survey Monkey that allowed the survey to be generated automatically to teachers who had not responded. The setting was set in one- week increments. This process continued until there were 10 participating teachers. The link included a questionnaire about including students in regular education classrooms. Teacher surveys were conducted electronically. Teachers responded to questions on the survey anonymously. The researcher designed the teacher and student surveys using Survey Monkey online survey software. The consent forms, informing survey participants of their rights and obligations, were included on the first page of the surveys as a prerequisite to participants answering survey questions. The researcher analyzed the survey information using the Survey Monkey online survey software. The questionnaire data were recorded anonymously by using Survey Monkey. Due to the anonymous nature of the questionnaire, all responses were considered.

Data Analysis

This study examined the success of inclusive classroom setting as compared to self-contained classroom settings. This study examined Tennessee Value-Added Assessment System (TVAAS) scores of special education and general education students in self-contained or general education settings in fourth grade and assigned to a common inclusion teacher for fifth grade. This study began in April 2011-2012 school year and finished during the 2012-2013 school year. The data collection was used to determine the effectiveness of a partial inclusion setting on students'

academic achievement as measured over time by students' (TVAAS) scores. The researcher randomly selected students from the group of students who met inclusion criteria. Archival data retrieved from TVAAS scores were assessed to determine the level of academic growth from Grade 4 to Grade 5. An analysis of repeated measures (ANOVA) determined the performance trend over time between the two groups. The p value was examined to determine if it was less than .05. If the p -value was less than .05, the pairwise comparison was analyzed to determine where the significant difference remained.

Findings

The purpose of this study was to provide information on student academic achievement in reading and teacher perceptions of inclusion support services. To ascertain these results, this researcher employed the following instruments and measures: (a) Tennessee Value Added Assessment Scores (TVASS) was used to determine student academic growth over a two-year period of time, (b) an attitude survey: Teachers Opinion Survey, to evaluate teacher attitudes toward inclusion.

Research Questions

To accomplish the purpose of this study, the following research questions guided the methodology:

1. In Tennessee public schools where inclusion is implemented, does the academic achievement of students in reading with learning disabilities in reading vary as they transfer from pull-out services to inclusion services as measured over time by the Tennessee Value-Added Assessment System (TVAAS)?
2. In Tennessee public schools where inclusion is implemented does the academic achievement in reading of general education students differ as they move from general education to an inclusive setting as measured over time by the Tennessee Value-Added Assessment System (TVAAS)?
3. What factors impact the attitudes of regular education elementary teachers toward including students with disabilities?

Participant Demographics

Participants in this study included both regular education students and special education students (served in the same inclusion classrooms) and were drawn from a suburban public middle school in Middle Tennessee. At the time of this study, the school had an enrollment of 712 fifth-through eighth-grade students. The participating school included 214 sixth-grade students. The sixth-grade students consisted of 172 students without IEPs and 42 sixth-graders with IEPs. Of the 214 students enrolled, 175 students were chosen to participate in the study. The researcher identified 140 students without IEPs and 25 students with IEPs. This research study involved the collection of TVAAS scores from students enrolled in Grades 5 and 6. Selected students had participated in the inclusion approach to teaching for one year. The year prior, all students participated in either general education or a self-contained class. To determine the impact of inclusion support services on students' academic achievement, data were collected from students' existing TVAAS scores.

Data and Statistical Results

Research Question 1. In Tennessee public schools where inclusion is implemented, does the academic achievement of students in reading with learning disabilities in reading vary as they transfer from pull-out services to inclusion services as measured over time by the Tennessee Value-Added Assessment System (TVAAS)?

To determine the effect of an inclusive setting on students with learning disabilities, the researcher examined TVAAS scores of 25 students with a diagnosed reading disability. A Repeated Measure ANOVA was conducted with the factor being learning disabled students receiving inclusion services in reading and the dependent variable being the TVAAS scores for 2012 and 2013. The means and standard deviations for TVAAS scores are presented in Table 1. The results for the ANOVA indicated no significance in learning disabled students receiving inclusion services in reading on their TVAAS scores for 2012 and 2013; therefore, the null hypothesis cannot be rejected, Wilks's $\Lambda = 1.00$, $F(1, 24) = .02$, $p = .96$, multivariate $\eta^2 = .00$.

Table 1

TVAAS Scores for students with learning disabilities

Years	<i>M</i>	<i>SD</i>
TVAAS 2012	16.28	15.21
TVAAS 2013	16.12	14.85

Note. N = 25

Research Question 2. In Tennessee public schools where inclusion is implemented, does the academic achievement in reading of general education students differ as they move from general education to an inclusive setting as measured over time by the Tennessee Value-Added Assessment System (TVAAS)? Research question two was quantitative in nature; it identified which academic setting produced the greatest gains. Therefore, variables included in this study sought to determine if an inclusion setting would produce an effect on students' academic achievement as measured by the TCAP.

A Repeated Measure ANOVA was conducted with the factor being general education students receiving inclusion services in reading and the dependent variable being the TVAAS scores for 2012 and 2013. The means and standard deviations for TVAAS scores are presented in Table 2. The results for the ANOVA indicated significance in general education students moving from no inclusion services to inclusion services in reading on their TVAAS scores for 2012 and 2013; therefore, the null hypothesis can be rejected. The results for the ANOVA were significant, Wilks's $\Lambda = .97$, $F(1, 148) = 4.63$, $p = .03$, multivariate $\eta^2 = .03$.

Table 2

General Education Students TVAAS Score

Years	<i>M</i>	<i>SD</i>
TVAAS 2012	45.23	23.10
TVAAS 2013	42.69	22.69

Note. N = 149

Research Question 3. What factors impact the attitudes of regular education elementary teachers toward including students with disabilities? This research question is qualitative in nature. It sought to determine the factor involved in teacher attitude toward inclusion. The data analysis suggested 90% of teachers surveyed strongly agreed that all students can learn. The remaining 10% of surveyed teachers agreed that all students can learn. Additionally, teachers concurred on the statement special education students have higher self-esteem when included. Teachers “strongly agreed” with this statement 50% of the times. The remaining 50% of teachers “agreed” with the statement, which indicates 100% of teachers believe inclusion increases exceptional education students’ self-esteem. Eighty percent of teachers surveyed disagreed with the statement “Special education students have higher academic achievement when included.”

Table 3

Teachers’ Opinions on Inclusion

	<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neither Agree or Disagree</i>	<i>Strongly Agree</i>	<i>Agree</i>
1. Special education students should be in special education classes	30%	20%	20%	10%	20%
2. Special education students learn social skills from general education students.	50%	50%	0%	0%	0%
3. Students in special education have higher academic achievement when included.	0%	0%	0%	50%	50%
4. Students in general education show more growth when placed in an inclusive setting.	0%	40%	30%	10%	20%
	0%	0%	0%	20%	80%

5. Students with disabilities have higher self-esteem when included.

6. Special education students hinder academic progress of general education students	0%	60%	20%	0%	20%
7. Special education students should be in general education classes	10%	10%	30%	20%	30%
8. All students can learn	0%	0%	0%	50%	50%
9. Special education children interfere with the teaching of general education students	10%	60%	10%	0%	20%
10. Special education students can learn.	0%	0%	0%	80%	20%

Conclusions and Discussion

This study examined the success of inclusive classroom settings as compared to self-contained classroom settings. This study also examined Tennessee Value-Added Assessment System (TVAAS) scores of special education and general education students in self-contained, pull-out, or general education settings in fifth grade and assigned to the same inclusion teacher for Grade 6. The first 149 students meeting the above criteria were selected for this study. Cohort 1 consisted of special education students in Grade 6 who received pull-out support services, or self-contained support services in Grade 5 and inclusion classroom support services in Grade 6. Cohort 2 encompassed general education students in Grade 6 who were assigned to a non-inclusion class in Grade 5 and assigned to an inclusion classroom support services in Grade 6. Students in Cohort 1 and Cohort 2 shared a common general education (English Language Arts) teacher and special education teacher. Both teachers simultaneously taught both cohorts. The teachers shared an inclusion classroom for ELA. Additionally, this study also examined teachers' attitudes and their perceptions regarding to the district's inclusion practices.

Academic Achievement of Students in Reading with Learning Disabilities

The results for Research Question 1 information obtained from TVAAS indicated for the special education students with learning disabilities in reading, no significant differences in academic achievement level occurred between the times of pull-out support services and inclusion support

services for year 1 and year 2. Therefore, no significant differences were determined before inclusion support service scores were compared with after- inclusion support service scores for these special education students. Therefore, the amount of learning and academic achievement that occurred, as defined by these change scores, did not differ significantly in the pre-inclusion support service scores and the post-inclusion support service scores for these special education students. Despite this finding, other research emphasizes the importance of inclusion support services. According to McCormack (2008), the inclusion approach to teaching accommodates appropriate support services to special education students to insure they remain successful in an inclusive environment. Inclusion allows all students to learn together in one classroom, thereby allowing the normalization of the special education students and the elimination of any stigma brought on by disability labels. Whether practiced through a partial or full time application, inclusion provides special education students with significant behavioral, cognitive, and social skills. The inclusion method addresses all learning styles in a child-centered, risk-free, and dialogic environment (Beninghof, 2006).

Academic Achievement of Students in Reading without Learning Disabilities

Results for Research Question 2 showed a significant difference in achievements for students without learning disabilities. Students without disabilities showed a decline in test scores once they were taken out of general education and placed in an inclusive environment. This finding differs from findings by other researchers. Luster and Durett (2003) explored the relationship between inclusion rates and the performance levels of students without disabilities on standardized state assessments for fourth and eighth graders as well as graduation rates for students with disabilities. They determined a positive correlation between inclusion and higher rates on district performance scores and high school diplomas earned by students.

Teachers' Attitudes Toward Inclusion

Results of Research Question 3 revealed all teachers surveyed agreed all students can learn. Current results correlates with research by Evans (2006), who concluded all children can learn with the implementation of differentiated instruction, consistently exposing students to high-quality instruction, varying instructional approaches to match the learning styles of students, providing access to high-quality preschool programs, consistently scaling up implementation of best-practice instructional strategies and approaches in all classrooms and in all content areas, and generating support from families and communities. Additionally, teachers concurred on the statement "special education students have higher self-esteem when included," which indicates 100% of teachers believe inclusion increases exceptional education students' self-esteem. Eighty percent of teachers surveyed disagreed with the statement "special education students have higher academic achievement when included."

Other Findings

The repeated measures ANOVA results did show a weak significance in learning disabled students receiving inclusion services in reading on their TVAAS scores for 2012 and 2013 (2012 mean = 16.28; 2013 mean = 16.12). TVAAS scores of students in exceptional education revealed a slight decrease from 2012 to 2013. While these low significance levels were not within the scope of the researcher's study, they are interesting, nonetheless. Authors Saint-Laurent et al. (1998) found significant effects for special education students in the areas of reading, writing and, mathematics; but no significant differences were found for students with

disabilities. As in the previous study, these results concluded the partial inclusion philosophy benefits some students' progress, but not all. Whereas Saint-Laurent et al. (1998) examined reading, writing, and mathematics in a fully integrated classroom, the present study focused specifically on reading achievement in a partial inclusion setting. Also, while Saint-Laurent et al. (1998) examined 13 different schools to determine the effects of inclusion, the present study focused exclusively on one particular suburban school to ensure consistency in the teaching style students received and the population composition, limiting the generalizability of this study.

Additionally, the teachers' opinion table revealed teachers have a generally positive acceptance of inclusion among most respondents. These findings are consistent with the results suggested by previous research.

Avramidis et al. (2000) found teachers who had been implementing inclusive programs for multiple years held significantly higher attitudes when compared to their counterparts. Likewise, Minke et al. (1996) reported that regular education teachers who co-taught in an inclusion setting held the most positive views of inclusion while regular education teachers in traditional settings held the least positive perception.

These findings are consistent with the results suggested by previous research. Manset and Semmel (1997) compared eight inclusion programs for elementary students with learning disabilities. Their research concluded students with learning disabilities placed in inclusive classrooms received no significant benefits from their placement (Manset & Semmel, 1997). Likewise, Minke et al. (1996) reported regular education teachers who co-taught in an inclusion setting held the most positive views of inclusion while regular education teachers in traditional settings held the least positive perception. These findings are consistent with the results seen by previous research. Avramidis et al. (2000) found teachers who had been implementing inclusive programs for multiple years held significantly higher attitudes when compared to their counterparts.

Strengths and Limitations

Strengths of this study are related, in part, to the study's small sample size. For example, the study included a single school, a single classroom in that school, a single survey instrument, and a single set of archived test data in one content area. Utilizing such a narrow scope allowed the researcher to expedite data collection, allowing more time to explore, analyze, and interpret the results.

Sample size also contributed to limitations of this study. In addition to being small, the study sample was nonrandom and homogenous; therefore, conclusions from this research can be generalized to only the current sample and may not apply to a larger, more diverse population.

Recommendations

In light of the small sample size and the negative statistically significant findings resulting from this study, the researcher offers the following recommendations to educators in the participating school: (a) Administrators should assure the workloads for general education students remain rigorous. Administrators can assure an appropriate workload for general education students by examining teachers' lesson plans, as well as providing in-services for teachers to assist with

rigorous reading lessons; (b) It is also recommended administrators in the participating school should then share this information with classroom teachers, lead teachers, and lead educators on staff and work together to find ways to apply survey results in the classroom.

In addition, the researcher recommends administrators educate general education teachers and exceptional educators on how they can best help all children improve TVAAS scores. Administrators can contribute to educators' knowledge of assisting all children by releasing the results of this study to the classroom general education teacher as well as the exceptional education teacher. I would also recommend in-services on teaching inclusion.

The researcher further recommends the use of outside observers to monitor how teachers apply differentiated instructions in their classroom. These outside observers could include lead general education teacher, lead exceptional education coach, or a district level supervisor.

Implications

Kinney (2008) argued American schools continue to struggle to find the appropriate balance to educate students with special needs. Due to PL-94-142, public schools' requirements to provide all students with a "free appropriate public education" remains an essential part of the education system (Kinney 2008). Focus should remain on ensuring the nation's exceptional education system provides all required services to students with disabilities.

While results of this study do not mirror results found in earlier studies, the researcher uncovered a few comparable findings. For example, special education students who participated in this study showed no significant on academic achievement. In Signor et al. (2005), researchers found that when all data were considered, the students in the inclusive class setting performed slightly better on the ELA, but no better on the math section. Signor et al. (2005) declared, "Results of this study and previous inclusion studies appear to indicate that students who are educated in inclusive settings achieve at a rate that is comparable to, if not better than those in self-contained settings" (p. 29).

Additionally, this study also revealed a significant decline between general education students when they were placed in an inclusive setting. This result is interesting because the findings of McDonnell et al. (2003) on inclusive placement on both the general student population and the special education students' population yielded a slightly different result. Researchers concluded when special education students and regular education students are educated in the same classroom, everyone benefits (McDonnell et al., 2003). Inclusive classrooms reduce or eliminate the need for separate placement for identified students (McDonnell et al., 2003). The benefits observed in these studies were a reduced fear of human differences when around others and significant growth in social cognition (McDonnell et al., 2003). In addition, the development of personal principles and ability to assume an advocacy role toward peers and friends with disabilities were also observed (McDonnell et al., 2003). While my study examined data from students' academic scores, McDonnell et al. (2003) looked at students' social emotional growth. Therefore, general education students' growth continues while placed in an inclusive environment.

Lastly, results of this study revealed most teachers have a positive opinion of inclusion. Overton (2004) found teachers' attitudes played a significant role in students' referrals into the special education program. In a study involving low achievers who were referred for special education services and low achievers who were not referred, researchers found teachers with a natural tendency to refer students for special education services maintained a higher number of referrals (Overton, 2004). Over the years, legislators have tried to resolve these issues through a more stringent application of pre-referral procedures (United States Commission on Civil Rights, 2005). Unfortunately, many of these safety nets have merely become a procedure rather than successful practice (Overton, 2004).

Results of the repeated measure ANOVA showed no significant difference between scores of students in special education after being placed in an inclusive setting. However, there was a significant decline in the scores among general education students after being placed in an inclusive setting. Moreover, this research revealed the following relationships are worth further exploration: (a) the relationship between students with disabilities who are participating in an inclusive program and the students' social skills, (b) the relationship between students without disabilities who are participating in an inclusive program and the students' social skills, and (c), the relationship between teachers' opinions and student achievement.

Recommendations for Future Research

Until we develop a better understanding of the many variables that contribute to student achievement, our knowledge about influences on student academic growth will be minimal. A qualitative study on a larger group of teachers with students involved in the study might allow the researcher to take an in-depth look at how teachers' perception of inclusion affect students' growth.

This research included a small number of middle school students in the state of Tennessee. Due to the small sample size, the researcher's ability to generalize the findings to a larger population was limited. The researcher recommends future research include students from other middle schools throughout the area, the state, or even in other regions of the United States. Due to the small and homogenous participant sample in this study, the researcher did not include ethnicity or gender as variables. The researcher recommends future studies include larger and more heterogeneous participant pools that include race and gender as variables.

Closing Summary

The success of inclusive classroom settings as compared to self-contained classroom settings remains an interest among stakeholders. Results of this study found no significant difference between reading scores of students with special needs once they were placed in an inclusive setting. However, this research discovered a significant decline in general education students' reading scores once they were placed in an inclusive setting. A survey of teachers' attitudes toward students in inclusion indicated teachers maintain a positive attitude toward inclusion. While result of this research cannot be applied to the larger population of middle school students and their teachers, educators should examine inclusive practices to determine ways to assist all students to achieve their maximum potential.

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