

ANALYSIS OF THE READING ABILITIES OF STUDENTS IN INTEGRATED
AND SELF-CONTAINED CLASSROOMS

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Abstract

The purpose of this study was to determine whether children with learning disabilities, placed into an integrated setting, would progress more in reading achievement than children with learning disabilities placed into self-contained special education setting.

In various school districts, children with learning disabilities are being "blended" or integrated into regular education classrooms for the whole day.

Some teachers team teach from regular and special education programs. They bring together an interesting mix of skills, strategies and experiences. Depending upon the specific student needs, various grouping combinations can be employed. Large group instruction can be supported by two teachers, an instructional aide, as well as additional support staff such as the language teacher.

The subjects for this study consisted of 35 children who were classified and received special education services in an integrated or self-contained setting. The integrated setting included a special education teacher, a regular education teacher and a part-time instructional aide. Degrees of Reading Power

(DRP) scores were used as a pretest and posttest measure.

In the past, children with learning disabilities were usually placed into a restrictive environment and mainstreamed when appropriate. However The Education for All Handicapped Act of 1975 (P.L. 94-142) mandated that all handicapped children be educated in the least restrictive environment to the maximum extent possible.

This study suggests that students with learning disabilities in the integrated setting outperformed the students with learning disabilities in the self-contained setting to a significant degree.

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Chapter I
Statement of the Problem

Purpose

The purpose of this study was to determine whether children with learning disabilities, placed into an integrated setting, would progress more in reading achievement than children with learning disabilities placed into a self-contained special education setting.

Question to be Answered

After one year of instruction, is there a statistically significant difference between the reading achievement of students taught in an integrated setting, and the reading achievement of students taught in a self-contained setting, as measured by the Degree of Reading Power test.

Need for the Study

If the integrated setting is appropriate, children with learning disabilities should be given an opportunity to benefit from the same educational experience as children without learning disabilities.

Many students demonstrate academic needs which require intensive instruction at an early age. These

students often require specialized teaching techniques, small groupings and specialized related services. The integrated classroom has been designed to address these needs within a traditional team taught setting.

In a study by Affleck, Madge, Adams and Lowenbraun (1988) special education students in the integrated classroom made gains comparable to their peers in resource rooms. The education of non-special education students was not affected. They make similar gains regardless of whether they are in an integrated classroom or a regular classroom.

Deno, Maruyama, Espin and Cohen's (1990) study could not confidently conclude that a self-contained or an integrated approach was more appropriate. In general, the children with learning disabilities in both classroom settings performed similarly on the Basic Skills Samples (short-duration timed tests in reading, math, written expression, and spelling).

Children with learning disabilities who are placed into an integrated classroom should be carefully monitored. According to Zigmond and Baker (1990), the current data make it clear that such students will not make progress if teachers continue with "business as usual."

All children have learning needs that surface in various ways throughout their school career. The concept of an integrated classroom is recognized nationally as well as at the local and state levels as a classroom environment which maximizes opportunities for success for all students (Wang, Peverly and Randolph, 1984).

Definition of Terms

Group-Assisted Reading: The teacher assists a group of students to read text material in unison, emphasizing correct phrasing, intonation, and pitch.

Learning Disabilities (LD): LD is a generic term that refers to a heterogeneous group of disorders intrinsic to the individual and presumed to be due to central nervous system dysfunction (Bryan, Bay & Donahue, 1988).

Regular Education Initiative (REI): Place children and adolescents with learning disabilities in a regular education classroom environment; address their academic and special education needs in a way that least isolates them from their peers; make these students feel less different.

Mainstream: To place a self-contained special education student into an appropriate regular education classroom environment for academic areas.

Integrated, Reintegration, Blended Classroom & Adaptive Learning Environment: An effort to mix "regular" students with students who have learning disabilities.

Degrees of Reading Power (DRP): The DRP measures "the ability to read prose at different levels of difficulty" (Users Guide, 1983, p. 5) and purports that the DRP "forecasts which books are at the Instructional Level" (Users Guide, 1983, p. 12).

Limitations of the Study

The subjects for this study consisted of eighty-five students enrolled in one suburban school district in Western New York State.

Students were enrolled in grades four and five. Results may have varied if a different age group had been studied.

Summary

Research shows that children who have learning disabilities and are placed into an integrated setting

tend to have increased self-esteem and interact positively with non-disabled peers.

However, there is little research showing what the relationship is between reading achievement in an integrated setting compared to a self-contained special education setting.

Chapter II

Review of Literature

Purpose

The purpose of this study was to determine whether children with learning disabilities, placed into an integrated setting, would progress more in reading achievement than children with learning disabilities placed into a self-contained special education setting.

Many students demonstrate academic needs which require intensive instruction at an early age. These students often require specialized teaching techniques, small groupings as well as specialized related services. The Integrated Classroom has been designed to address these needs within a traditional team taught setting.

A review of related literature includes the topics of: Special Education History, Social Acceptance and the Integrated Setting.

History

The Education for All Handicapped Children Act of 1975 (P.L. 94-142) mandates that all handicapped children be educated in the least restrictive

environment to the maximum extent possible. Recent research using an integrated approach has shown favorable academic and social effects when compared with resource room students (Wang and Birch, 1984a, 1984b).

A significant number of special education students (about 33%) are provided education in restricted settings, such as separate classrooms or buildings, and public or private residential facilities; but most are served in either regular classrooms or resource programs. According to Gerber, Levine and Donnerstein (1989) at least one-fourth of all special education students now receive the major part of their education in regular classroom environments.

It is important for educators to understand what a learning disability is because placing a child into a self-contained setting may not be the most appropriate action.

Almost 4.5 million students (birth to age 21) now receive special education services, an increase of about 20% since 1976-1977, but accounting for significantly fewer than the 12% of students once projected by the United States Department of Education. Much of the increase is due to the rise in students

classified as having some form of a learning disability, now accounting for over 43% of all students receiving special education (Gerber, Levine and Donnerstein, 1989).

The self-contained special education program serves children showing a wide "discrepancy" between "ability" and "achievement."

The chapter I program is supposed to serve only students who have a sufficient number of eligibility "points" according to an increasingly selective statewide eligibility system (Reynolds, Wang and Walberg, 1987 p. 392).

Studies show that students should be identified as needing special services only when necessary and should be placed with their non-handicapped peers to the greatest extent possible, and at the same time the educational interest of all students should be protected (Kauffman, Gerber and Semmel, 1988; McKinney and Hocutt, 1988).

The issue is not whether there are differences among students. Obviously, there are differences, even extreme differences. It is also clear that because of these differences some students may need adaptations or modifications in their educational experiences. However, this should not be used as a justification to

label, to segregate or to maintain a dual system of education (Stainback and Stainback, 1984).

Social Acceptance

Studies have indicated that disabled students interact cooperatively in the regular education setting and that they show positive levels of achievement, self-concept and emotional adjustment (Jolly, 1990; Madden and Slavin, 1983; Slavin, Madden and Leavey, 1982; Wang, 1980).

When students are pulled out of the classroom for special services, they may become stigmatized resulting in lowered expectation and a focus on failure (Will, 1986).

Hundert and Houghton (1992) conducted a study of 14 preschool students who ranged in age. They also varied in their classified handicaps (nine were moderately developmentally disabled, two had behavior disorders, one had a hearing impairment and one was visually impaired). The students were integrated into four preschool classes where a Classwide Social Skills Program (CSSP) was introduced. The study indicated that the CSSP increased positive play of children with disabilities comparable to normally developing children

in their classes. The researchers found that social interaction must be followed by a positive response from a non-handicapped peer for future social interactions to occur under natural conditions.

Sabornie, Marshall and Ellis (1991) found that children that were classified as learning disabled and were placed into self-contained settings, were perceived as being "different" by their nonhandicapped peers. However, when the learning disabled children were integrated into a regular classroom, for a social situation, the non-handicapped peers did not perceive any differences.

The Integrated Classroom

Many programs across the United States are successfully mainstreaming young children with mild to profound disabilities in typical educational settings.

Integration is the process by which physical, social and academic opportunities are created for the child with a disability to participate with others in typical school or community environments (Salisbury, 1991).

The approach to identifying students who fall within the Regular Education Initiative (Integrated) setting is qualitative rather than quantitative. The

need to classify a student varies from teacher to teacher, district to district. A simple formula would be difficult to use in determining the appropriate placement of children with learning disabilities. The judgment of thoughtful professionals should be considered and is often quite reliable (Jenkins, Pious and Jewell, 1990).

In a study by Deno, Maruyama, Espin and Cohen (1990) efforts by schools to develop specific model programs that would integrate students with mild disabilities were evaluated. They state:

Our examination of student achievement difference between programs seems to reveal that while both low-achieving students and those with mild disabilities did better in integrated programs, there was no differential benefit for special education students (p. 161).

Affleck, Madge, Adams and Lowenbraun (1988) compared student achievement data of the Integrated Classroom Model with achievement data in resource room programs. The results of their three year study support the integrated classroom model as a viable alternative service delivery model for students with learning disabilities, as the results are virtually indistinguishable from those of the resource room

program. This is evidenced by the closeness of the mean achievement scores obtained between the integrated and resource room students on the Woodcock-Johnson Psycho-Educational Battery (Affleck, Madge, Adams & Lowenbraun, 1988).

Schulte, Osbourne and McKinney (1990) collected pretest and posttest achievement test data for 67 children with learning disabilities assigned one of four conditions: one period of resource room instruction per day; two periods of resource room instruction per day; consultative services combined with in-class instruction; and consultative services to classroom teachers. This study provided support for the two models of consultative service delivery.

Schulte, Osbourne and McKinney state:

Students assigned to both consultation models of service made greater overall academic gains than students assigned to both resource room programs. However, these gains were not evident when achievement was examined separately for reading, written language, and math (p. 169).

Students with learning disabilities who are placed into an integrated setting may show growth in classroom behavior, academic achievement, and social adjustment. A study by Zigmond and Baker (1990) found that students

with learning disabilities who were placed into an integrated setting came to school just as regularly as the regular students; most did not present serious behavior problems and, as a group, spent as much of reading class and more of math class on task than they had in the self-contained special education classes.

The integrated model is designed to create school environments that maximize each student's opportunities to master basic academic and social skills (Wang & Birch, 1984a).

Graham (1990), using the integrated preschool program at the West Virginian Children's Center Institute, wrote a paper about the integration of disabled children with their non-disabled peers. Graham (1990) found that children in this setting showed the same progress as do children in other high quality programs. The children showed a high degree of empathetic behaviors. The progress of disabled children was greater than expected.

Seibert (1991) conducted a study on integrated classrooms in a large school district in Michigan using 16 integrated (co-taught) classrooms, 10 regular classrooms and 4 special education classrooms. Data were collected from all teachers in the building,

implementing teachers, special education students in the project and general education students in the co-taught classrooms. Data were obtained through pencil and paper surveys. The survey was a qualitative and quantitative study, using forced choice and open-ended questions. The questions pertained to teachers' and students' attitudes in regards to their classroom environment. Results of the study found the integrated classrooms to be successful. Parents, teachers and students (general and special education) were all in favor of this setting.

Wang, Peverly and Randolph (1984) researched the effectiveness of a full-time mainstreaming program. There were statistically significant achievements ($p < .01$) in reading and ($p < .001$) in math made by both the general education and the special education students, after the students were in the integrated setting for one school year. There was essentially no difference in the classroom behaviors of the two groups, although there were some differences in selected outcome measures for general education and special education students (e.g., the achievement levels of the special education students were found to lag behind those of the general education students. Despite this lag,

they did attain one-year gains in math and reading achievement.)

In the Boston School District, a task group was created to provide the superintendent with recommendations regarding integrated classrooms. The task group found that class size should be considered when forming an integrated classroom. Individual needs of students need to be considered for students with and without disabilities (Feldman, 1991).

All students, whether classified as general education or special education, learn in different ways as individuals and require varying amounts of instruction and time to learn (Wang, Peverly, & Randolph, 1984). Meyers, Gelzheiser, Yelich and Glenn (1991) found that classroom teachers participating in pull-in (integrated) programs reported more frequent collaborative meetings than those using a pull-out (self-contained) approach, and these differences represent an increase in frequency of meetings when compared with the prior year's frequency.

Children should be included in, not integrated into, age appropriate mainstream environments. When supplementary aids and supports have been tried and found to be insufficient, then and only then should

alternative service delivery options be considered.
(Salisbury, 1991).

The integrated classroom environment needs to be educationally challenging for all students, including those with learning disabilities.

According to Graham (1990), Feldman (1991), Madden and Slavin (1983) and Siebert (1991) there should be a commitment to share responsibility between general and special educators. Stainback, Stainback and Harris (1989) have suggested that the special educator's role change to that of support facilitator to better support mainstreaming efforts.

With careful planning, it should be possible to meet the unique needs of all students within one unified system of education--a system that does not deny differences, but rather a system that recognizes and accommodates for differences (Stainback and Stainback, 1984).

Chapter III

Design of the Study

Purpose

The purpose of this study was to determine whether children with learning disabilities, placed into an integrated setting, would progress more in reading achievement than children with learning disabilities placed into a self-contained special education setting.

Many students demonstrate academic needs which require intensive instruction at an early age. These students often require specialized teaching techniques, small groupings as well as specialized related services. The integrated classroom has been designed to address these needs within a traditional team taught setting.

Null Hypotheses

1) Null Hypothesis: Number One

There will be no statistical difference between two randomly sampled pretest mean scores of the students participating in this study.

2) Null Hypothesis: Number Two

There will be no statistically significant difference between the pretest and posttest mean scores of the students with learning disabilities placed into integrated classrooms. The posttest was the Degrees of Reading Power Test.

3) Null Hypothesis: Number Three

There will be no statistical significant difference between the pretest mean scores of a selected sample of 49 participants when the posttest, The Degrees of Reading Power test, is administered to children with learning disabilities placed into a self-contained special education setting.

4) Null Hypothesis: Number Four

There will be no statistically significant difference between the mean achievement scores of children with learning disabilities placed into an integrated setting and the mean achievement scores of children with learning disabilities placed into a self-contained special education setting based on the results of the Degrees of Reading Power test.

Methodology

Subjects

The subjects (N= 85) for this study were fourth and fifth grade students from intermediate buildings in a suburban Upstate New York school district. Some of the students attended a self-contained special education class (N= 36), while others were placed into an integrated setting (N= 49). The integrated setting included a special education teacher, a regular education teacher and a part-time instructional aide. The students in this study exhibit some type of a learning disability (e.g., auditory processing, language processing, attention deficit).

Instrument

Degrees of Reading Power (DRP) scores were used as a pretest and posttest measure. The DRP is a standardized reading test that is administered to fourth and fifth grade students each spring. The DRP tests are designed as homogenous measures of prose comprehension. The format of the test is an adaptation of a cloze procedure, known as a maze technique. Each passage has seven deleted words and five response options are provided (Bruning, 1985).

Results of the DRP are reported in units, that give a student's independent, instructional, and frustration reading level. The DRP provides a measure in grade equivalent units with an average error of about one grade in the lower grades and about two grades in the upper grades. These grade equivalent values appear to be reliable and valid (Carver, 1985).

Bruning's (1985) review of the Degrees of Reading Power Test states the reliability coefficient between .86 and .91 and concludes that it can be regarded as a quite reliable test.

Procedure

The researcher talked to fourth and fifth grade teachers involved with intermediate self-contained and integrated classrooms and randomly selected students from each setting.

Degrees of Reading Power Test results were collected for each subject.

Analysis of Data

The researcher analyzed the results from the 1991 Degrees of Reading Power Test of selected students placed into a self-contained, as well as integrated

classroom setting. This test served as a pretest measure.

The researcher also analyzed the results from the 1992 Degrees of Reading Power Test using the same subjects. This test was used as a posttest measure.

The group data from the two measures were analyzed using a dependent t-test. A t-test using the DRP ($P=.75$) scores of the 85 students was calculated to determine any significant difference in their reading achievement. $P=.75$ was chosen because it is the instructional reading level of the students.

Summary

This study examined whether there was a statistically significant difference in reading achievement test scores of children with learning disabilities placed into an integrated setting and children with learning disabilities placed into a self-contained special education setting. A t-test using the DRP scores of the 85 subjects was calculated to determine any significant difference.

Chapter IV

Analysis of Data

Purpose

The purpose of this study was to determine whether children with learning disabilities, placed into an integrated setting, would progress more in reading achievement than children with learning disabilities placed into a self-contained special education setting.

Findings and Interpretations

The subjects (N=85) for this study were fourth and fifth grade students who exhibited some type of a learning disability (e.g., auditory processing, language processing, attention deficit). Thirty-six students were placed in an integrated setting, while forty-nine students were placed into a self-contained special education setting.

The pretest t value of 1.052 (see appendix A) indicated that there was no significant difference between the two groups according to their pretest scores. However, their posttest mean scores had a t value of 2.236 (see Appendix D). This indicated that there was a significant difference between the two

groups mean posttest scores. In other words, the students in the integrated setting, on the average, scored significantly better on the posttest at the 95% confidence level.

Table One: Null Hypothesis One

Group	Mean	t
Integrated (N=36)	31.58	
Self-Contained (N=49)	29.06	+1.052 (N. S.)

$$t_{crit} = \pm 2.000$$

Since the t required for 83 degrees of freedom at the 95% confidence level is ± 2.000 and since the t obtained was +1.052, we must retain the null hypothesis and conclude there is no statistically significant difference between the participants' pretest mean scores.

Table Two: Null Hypothesis Two

Group	Mean	t
Integrated Pretest (N=36)	31.58	
Integrated Posttest (N=36)	44.81	-7.68

$$t_{\text{crit.}} = \pm 2.032$$

Since the t required for 35 degrees of freedom at the 95% confidence level is ± 2.032 , and since the t obtained is -7.68, we must reject the null hypothesis and conclude there was a statistically significant difference.

Table Three: Null Hypothesis Three

Group	Mean	t
Self-Contained Pretest (N=49)	29.06	
Self-Contained Posttest (N=49)	39.59	-13.93

$$t_{\text{crit.}} = \pm 2.012$$

Since the t required for 48 degrees of freedom at the 95% confidence level is ± 2.012 , and since the t obtained is -13.93, we must reject the null hypothesis and conclude there was a statistically significant difference.

Table Four: Null Hypothesis Four

Group	Mean	t
Integrated (N=36)	44.81	
Self-Contained	39.59	+2.236

$t_{crit.} = \pm 2.000$

Since the t required for 83 degrees of freedom at the 95% confidence level is ± 2.000 , and since the t obtained was $+2.236$, we must reject the null hypothesis and conclude there is a statistically significant difference between the participants' posttest mean scores.

Chapter V

Conclusions and Implications

Purpose

The purpose of this study was to determine whether children with learning disabilities, placed into an integrated setting, would progress more in reading achievement than children with learning disabilities placed into a self-contained special education setting.

Conclusions

The results of this investigation demonstrate that a statistically significant difference does exist between the integrated and self-contained mean posttest scores on the DRP. Overall, the learning disabled students in the integrated setting outperformed the learning disabled students in the self-contained setting to a significant degree.

Implications for Research

Previous research focused on the area of mainstreaming. Mainstreaming means that a child with a disability goes into some academic classes for a subject (e.g., reading or math) if he/she is able to function at the level of a class.

Further research might involve the integration of learning disabled students into regular education classrooms. Integration means placing students with disabilities, as much as possible, into regular education classes for all or part of a day. Necessary support services are provided for the student and the teacher within the regular education class.

More research regarding the number of pupils in the integrated classroom is also needed. New York State law mandates the self-contained special education class size. However, additional studies could be conducted to determine the most appropriate class size for the integrated classrooms. The research could also attempt to determine an appropriate ratio of disabled to non-disabled students in an integrated setting.

Another area of research might concern integration and type of handicap. The studies could investigate the integration of children with severe handicaps who have not been previously integrated.

Some districts define integration to include one special education teacher to two or more regular education classrooms. Further research should be conducted to determine the effectiveness of this method

compared with a one-to-one special education to regular education teacher ratio.

Implications for the Classroom

The teaming of teachers from regular and special education programs brings together an interesting mix of skills, strategies and experiences. Depending upon the specific student needs, various groupings can be employed. Large group instruction can be supported by two teachers, an instructional aide, as well as additional support staff such as the language teacher. Additional instruction can be offered in smaller groups with various levels of teacher guidance and structure. This approach allows for added assistance in gaining basic knowledge, as well as for the enrichment of curriculum for advanced students.

Students with needs beyond the resources available within the integrated setting should not be placed within this setting. This may include children requiring intensive supervision. More restrictive classroom environments should be utilized for extreme acting out children. Students who have severe academic needs should also be placed in alternative settings when their needs exceed the instructional support

available. What is effective for some, may not be effective and beneficial for everyone.

Summary

All children have learning needs that surface in various ways throughout their school career. The concept of an integrated classroom is recognized nationally as well as at the local and state levels as a classroom environment which maximizes opportunities for success for all students.

The researcher hopes that the results of this study may benefit teachers involved with the integrated classroom.

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