Efficacy and Perception of Inclusion at the Secondary Level for Students with Mild Disabilities: A Review of the Literature

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Abstract

The purpose of this article is to provide a review of the published literature on the efficacy and perception of inclusion for students with mild disabilities at the secondary level. In this review, ten studies were obtained, reviewed, and synthesized. The studies reviewed indicated mixed results have been found regarding the differential efficacy of an inclusive environment to a resource environment on a number of different dependent variables. Further concerns and challenges are raised regarding aspects of implementation of inclusive programs. Future research issues and implications for both teachers and students with mild disabilities at the secondary level are discussed.

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In general, all involved in education including researchers, policymakers, school personnel, and stakeholders such as students and parents have advocated for the inclusion of students with disabilities for several years. Section 1412 of the *Individuals with Disabilities Education Act* (IDEA) states that students with disabilities must be educated with non-disabled peers "to the maximum extent appropriate." Further the statute indicates that the removal of special education students from the

regular education environment is appropriate "only when the nature of severity of the disability of a child is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily" (IDEA, 1997). The Regular Education Initiative (REI) is a movement in which the inclusion of students with disabilities in the general education environment is deemed appropriate. Supporters of the REI contend that the vast majority, and sometimes the total population, of students with disabilities can and should be educated with their general education peers. Further, there is evidence that the number of students educated in general education settings has increased since 1988 (McLeskey, 1999). However, while the IDEA does mandate that the most appropriate placement for students with disabilities is as close to the general education environment as possible, it further notes that schools are required to offer a "continuum of alternative placements" as the legislation recognizes that not all students will be able to be educated in the general education environment (IDEA, 1997).

High school students, parents of high school students, and secondary educators often view inclusion in a different manner than those involved in K-8 education. For high school students with mild disabilities, inclusion may be the most direct route to instruction that will prepare students for receipt of a regular education diploma, post-secondary school options, and passage of possible state required high-stakes exams. Further, due to the federal *No Child Left Behind Act* (NCLB, 2001) more and more students with disabilities are being included in assessments that are used as a measuring stick for schools and students today. Students with disabilities may increasingly become a part of general education classrooms due to the current focus surrounding assessment. However, many associations that support students with disabilities such as the Learning Disabilities Association of America (LDA) and the Council for Exceptional Children (CEC) call for a continuum of placement options as this will allow for individualized decisions to be made regarding their students. Court cases also demonstrate that the issue of inclusion should not be considered an absolute right or necessarily the best placement of students with disabilities. Courts have recognized the negative effects a student's presence in general

education may have on teachers and peers in conjunction with the academic and non-academic benefits of the student with the disability (Zirkel & Gluckman, 1996; Clyde K. v. Puyallup School District, 1994).

In high schools, one of the most prevalent options for inclusion of students is the collaborative teaching model which involves both a general educator and a special educator sharing responsibility in one classroom instructing students with and without disabilities (Gerber & Popp, 1999). While there has been extensive professional writing regarding inclusion and collaboration, the vast majority of this writing has been in the form of theoretical papers arguing for or against inclusion, articles designed to guide schools in the implementation of inclusive programs, and reviews of schools that have inclusion programs deemed successful by the authors. However, there is limited research regarding the effectiveness of this model in the instruction of students with disabilities (Boudah, Schumacher & Deshler, 1997; Gerber & Popp, 1999). The repercussions surrounding the decision regarding participation in a general education or a collaborative instruction setting at the high school level make such research extraordinarily important to students, parents and educators. Due to these conflicting perceptions regarding the inclusion of students with disabilities in general education classes, the scant research on efficacy and perception of inclusion should be addressed.

Method

Literature Search Procedures

The following review of the current literature associated with students with mild disabilities at the high school level was completed using various computer searches of the ERIC and Education Abstracts databases. A search was conducted using the key terms *inclusion*, *disabilities*, and *high school* limited by the years 1994 to present, which yielded 124 results. When this search was further refined to include only journal articles the results included 45. Each of these results was scrutinized for possible applicability, and many dealt with younger students or students with more severe disabilities. Further searches were conducted using author names of those known to conduct research in the area of

inclusion. The following review includes 10 studies that use various methodologies and reference secondary age students with mild disabilities (see Tables 1 and 2).

Perception of Inclusion

A significant amount of research conducted regarding inclusion at the high school level, and other levels, has been in an effort to determine the perceptions of inclusion held by students with disabilities, students without disabilities, parents of students with and without disabilities, teachers, and administrators (Trent, 1998; McLeskey, Waldron, So, Swanson & Loveland, 2001; Barnett & Monda-Amaya, 1998; Gerber & Popp, 1999; Guterman, 1995, Walsh, 1991). These differing perceptions demonstrate that there are many mixed views within the educational community regarding the need for and the ability of schools to implement inclusion programs (see Table 1).

Walsh (1991) investigated the perceptions and preferences of 97 students with disabilities, 26 of their parents, 21 general and special education teachers, and 3 administrators regarding the success of an inclusion program that incorporated the collaboration of both a general and a special educator into the continuum of services provided to special education students. The collaborative program had only been in existence for one year allowing for a comparison of experiences with collaborative teaching versus their experiences with special education pull-out classes of the previous year. All participants responded to a survey, and the special education students indicated that they enjoyed school more and felt better about themselves as a result of being enrolled in the collaborative classes. Parents and administrators also indicated that they felt the program was successful. No adverse effects were reported as a result of participation in the collaborative classes.

Trent (1998) conducted a case study of secondary teachers who were involved in a collaborative program. Among the issues raised were the special educator's role in the classroom, the perception that she was not always using her time effectively to help students, and the fact that she was often not in the classroom during the academic period. Further noted was the lack of communication and

planning time that often erected barriers to effective instruction within the classroom. There were also benefits noted, by both the regular and special educators, such as the increased amount of organizational skills of the students and the increased content knowledge by the special education teacher. The need for planning time in order for collaboration to be successful was cited, and this need is often cited throughout the collaboration literature (Jorgensen, 1995; Walther-Thomas, Korinel & McLaughlin, 1999). Overall, the teachers indicated that with more administrative support, planning time, and solid communication the collaboration model could have been more successful.

McLeskey, Waldron, So, Swanson, and Loveland (2001) surveyed two groups of teachers from six schools; one group consisted of three schools that had been involved in an inclusion program over the previous year while the other group of three schools had yet to implement such a program. While both groups overwhelmingly supported the inclusion model, the group of teachers already involved in inclusion had much more positive views regarding the practice. The results suggest that teachers who have not previously been involved with inclusion may have serious concerns regarding implementation that need to be addressed prior to the program in order for it to be successful with those teachers.

Barnett and Monda-Amaya (1998) investigated how principals view inclusion. The researchers randomly selected 115 schools of varying levels and sent surveys to each of the principals. The results indicated that, at the high school level, the majority of students being served in a general education environment with special education consultation were students with learning disabilities and behavioral disorders, respectively. The data did not yield a clear definition of inclusion at this level indicating that, depending on the school, the type or amount of inclusion may vary significantly. Further the principals felt that inclusion could work in their schools, but overwhelming felt that not all students should be included. Lastly, the results indicated that the principals did not feel as though their schools were adequately prepared to support inclusion programs.

Gerber and Popp (1999) interviewed students with and without disabilities and their parents across grade levels in order to assess their experience with a collaborative teaching model. The students without disabilities were positive about the classes indicating benefits both academically and behaviorally as a result of having two teachers in the classroom. Students with mild disabilities including learning disabilities, behavioral disorders, mild mental retardation, orthopedic impairment, traumatic brain injury, speech impairments, and other health impairments also indicated that the collaborative teaching model enabled them to do well academically in such challenging classes. They further noted better organizational skills and an increased use of learning strategies. The parents of students without disabilities indicated that the inclusion of students with disabilities helped to foster an understanding for others, and parents of students with disabilities noted and increased level of self-esteem in their children. Both the parents and students associated with the special education program hoped that their children could be a part of the collaborative model again.

Guterman (1995) interviewed nine students with learning disabilities who had not participated in general education classes at their school and were enrolled in separate special education classes. These students all indicated that as they left the general education classroom for a more restrictive environment they were stigmatized, and they further reported that general education students viewed them as less capable. They felt as though their peers in general education had a definition of learning disabilities that intertwined intelligence and academic achievement. Although the results were mixed regarding their current resource placement, many students divulged that they resented the low-level and irrelevant curriculums in their classes, and they further indicated that they felt their classes had not helped them. However, it is noteworthy that these students stated that they did not think that a collaborative teaching approach would work for them either, and they felt as though the supportive special education teacher would draw negative attention toward them in the general education classroom. Most of these students indicated that staying in their smaller classroom was the answer, but

they stated that taking away the label of special education and implementing a more challenging curriculum would better serve them.

Overall, the research does seem to suggest that the majority of stakeholders in the inclusion movement including students, parents, educators, and administrators support the inclusion of students with mild disabilities in general education classes (Trent, 1998; McLeskey et. al., 2001; Barnett & Monda-Amaya, 1998; Gerber & Popp, 1999; Guterman, 1995, Walsh, 1991). However, there are significant apprehensions that must be contended with prior to implementation of such a program (McLeskey et. al., 2001, Gerber & Popp, 1999). Teachers and students need to have their concerns addressed during program development in order to ensure that the implementation is successful. Students need to feel as though they will not be stigmatized and that the curriculum will be challenging with support. Teachers also may be unsure of their role in the general education classroom. To combat this there needs to be an effort toward solid communication and support both with and between teachers (Trent, 1998). The perception of inclusive programs is generally positive, but without these concerns being addressed, perceptions can change.

<div align="center">Efficacy of Inclusion</div>

While the majority of the research associated with inclusion is qualitative or conceptual in nature, there are some studies that have attempted to address the question of efficacy of inclusion through a collaborative model using quantitative means (Boudah, Schumacher & Deshler, 1997; Schumacher, Deshler, Bulgren, Davis, Lenz & Grossen, 2002; Lundeen & Lundeen, 1995; Walsh & Snyder, 1993). However, these studies produced mixed results and drawing a clear consensus from the applicable research is difficult (see Table 2).

Boudah, Schumacher, and Deshler (1997) evaluated the effects of a collaborative instructional model on teacher performance, student engagement, and academic outcomes using both single subject and group design methods. The study involved the use of four experimental and four comparison

secondary level classes consisting of grades 6, 7, 8, and 10. There were 32 students in each group who participated in the study, and each group was relatively evenly divided between students who were considered low achievers without disabilities and students who had mild disabilities including learning disabilities, behavioral disorders, mild mental retardation, and other health impairments. The teachers in the experimental group were instructed on a specific method of collaboration involving the use of one teacher as a presenter with the other teacher as a mediator. The teachers were also instructed on how to integrate strategy instruction into the general curriculum as a method of enhancing the performance of the students who may need such training. The results were mixed with the experimental teachers spending more time mediating the learning of students through instructional strategies, but less time on actual content instruction in the intervention phases. Further, student engagement remained low across all phases with student test scores either decreasing or demonstrating only minimal improvement. A low amount of engagement with the students was demonstrated in all inclusive classrooms involved in the study. The authors conclude that there is a need for teacher training and follow-up in order to make collaborative classrooms work for secondary students with mild disabilities. Further, they indicate that a lack of teacher engagement, despite learning strategies instruction, will translate into low levels of achievement. Due to the low levels of student achievement across phases and groups in this study, the authors call into question the "usefulness and outcomes of collaborative instruction." They indicate that a special education program that eliminates pull-out programs may be detrimental to students.

Schumacher, Deshler, Bulgren, Davis, Lenz, and Grossen (2002) undertook a large study that evaluated several aspects of inclusive practices at nine high schools. The researchers used both qualitative and quantitative methods including interviews, surveys, and standardized test administration to evaluate a variety of outcomes from students. The participants included students who had disabilities and were enrolled in at least one general education course or had been identified by

teachers as students who could have been enrolled in general courses with the appropriate amount of support, students without disabilities (at-risk and normally achieving), parents, special and general educators, and administrators. The results demonstrated that although all administrators indicated that an inclusive program may help students with disabilities, only eight of the nine schools had a policy related to inclusion. Only two schools had specific support for students with disabilities enrolled in general education classes such as tutoring or learning strategies instruction. The schools with these supports were the only ones that had a majority of students with disabilities in rigorous general education classrooms. Further, it was noted through observations that students in the special education pull-out classrooms spent a noticeable amount of time working independently, and the special education teachers in most schools spent less that 50% of the class time interacting with students. The general education teachers noted that they did not have a solid idea regarding how many students or which students in their classes actually had disabilities. If they did know that a student had a disability they indicated that they did not know what the disability entailed. These teachers were observed interacting with students 70% to 90% of the class time. It was found that the reading levels of the text books used in the general education classes ranged from five to seven grade levels higher that the reading level of the students using them.

Interestingly, the students with disabilities, regardless of where they were placed, had scores very similar to students without disabilities on measures of achievement. However, the students with disabilities preformed more poorly than students without disabilities on state and national tests. Parents of students with disabilities had positive responses regarding self-contained classes for rigorous curriculum areas. Conclusions include that most schools do not have a comprehensive special education program designed to make students successful across a continuum of placements. Further, students with disabilities will not be truly able to access the general curriculum until there are systematic and research driven practices in place. Lastly, the researchers call for a restructuring of some general

education classes and the methods teachers used to assign students with disabilities to such classes in order to ensure that all students are able to participate in the curriculum offered in such courses.

Lundeen and Lundeen (1993) compared 318 students with and without disabilities enrolled in collaborative classes having both a general and a special educator.   The students with special needs included those who had been diagnosed with a learning disability, behavioral disorder, mild mental retardation, and students with limited English proficiency. The results indicated that students with disabilities were able to achieve class grades equivalent to those of their peers despite substantially lower reading comprehension scores. All students included in the study demonstrated increased class grades while in the collaborative classroom in comparison to class grades earned previously.

Walsh and Snyder (1993) compared two groups of ninth grade students on a variety of quantitative measures to determine the impact a collaborative general education environment with two teachers had on students compared to those who were enrolled in traditional general education classroom with only one teacher. The groups consisted of a diverse population of learners including those with and without disabilities with 343 students enrolled in collaborative classroom and 363 students in the traditional general education classroom. Although no significant differences were noted on the final grades of the two groups, the group enrolled in the collaborative environment had a significantly higher passage rate on the state competency tests. The results indicate that a collaborative environment can be effective in the instruction of a diverse population of learners.

The research regarding the effectiveness of inclusion and collaborative instruction are mixed in that while some studies do reveal benefits to students (Walsh & Snyder, 1993; Lundeen & Lundeen, 1995), others reveal that collaboration is a complex dynamic that should not be accepted as an approach that is always appropriate (Boudah et. al., 1997; Schumacher et. al., 2002). However, results do indicate that when students are supported they are included more often (Schumacher et. al., 2002). Further, students in inclusive environments will not thrive unless there is a substantial amount of

teacher engagement regardless of teacher training (Boudah et. al., 1997). Promising, it is noted that students can achieve at levels commensurate with peers when included, and that they may even be able to achieve at higher levels (Walsh & Snyder, 1993). Clearly, more research is needed before a determination can be made regarding efficacy of inclusion for secondary students with mild disabilities.

Conclusion

Researchers have cautioned against the overall and outright acceptance of the inclusion model for all students and have advocated a continuum of placement options (Fuchs & Fuchs, 1994). Further, the research regarding the effectiveness of a collaboration model has demonstrated mixed results (Walsh & Snyder, 1993; Lundeen & Lundeen, 1995; Boudah et. al., 1997, Schumacher et. al., 2002, Carlberg & Kavale, 1980). Some studies indicate that when students are included they may demonstrate grades equivalent to peers and higher passage rates on state competency tests (Walsh & Snyder, 1993, Lundeen & Lundeen, 1995). However, despite collaborative efforts and teacher training, students may demonstrate lower scores on achievement measures if teachers are not engaged with students (Boudah et.al., 1997), and results have documented that student engagement may be an issue for special education teachers in a collaborative environment (Trent, 1998).

It seems as though, when done well, inclusive environments are viewed favorably by participants and stakeholders (McLeskey et al., 2001). However, many qualitative studies have examined inclusive programs, and found that while most of the educators, students, and parents support inclusion, there are very real concerns regarding actual implementation and further support for a continuum of services (Trent, 1998; McLeskey, Waldron, So, Swanson & Loveland, 2001; Barnett & Monda-Amaya, 1998; Gerber & Popp, 1999; Guterman, 1995, Walsh, 1991). Overall, it seems as though there is not enough evidence to draw firm conclusions regarding the inclusion of students with mild disabilities at the secondary level either way. It has become commonplace within education to support

inclusion as a civil right. However, there is limited data to either affirm or deny that inclusive environments are best for students with disabilities.

Future Research

With the overall national climate and difficult legal considerations that educators, parents, and students must make on a daily basis regarding placement, it is imperative that there be a research base that is more conclusive regarding the effectiveness of inclusion and collaborative instruction for students with mild disabilities at the secondary level. First, more of a consensus regarding the dependent measures used to determine efficacy are needed. For example, students may benefit socially from inclusive environments but not experience academic success, or vice versa. What should be the measuring stick when evaluating inclusive placement options for students within research? With the current focus on testing and standardized achievements measures within the field of education, it may be prudent to evaluate the effect that inclusion has on such scores.

Further, if certain inclusive environments are found to be effective, then what is it about the collaborative or inclusive environment that fosters such success? More research is needed in determining the components that go into successful inclusion. Moreover, what type of student is most likely to experience success within such an environment? The characteristics of successful students should be evaluated in an effort to aid educators in successful placement suggestions for parents.

Implications

The implications of the current research base regarding inclusion are minimal simply due to the fact that there is limited research and mixed results. Little impact can be made on the field if modest research is undertaken in the area of inclusion. Inclusion continues to be viewed as a moral or civil issues rather than a research based practice, and this view will not further research in the area as often inclusion is seen as best practice despite the lack of research. The federal laws governing special education as well as most stakeholders are all advocates for inclusion due to an overriding sense of

fairness, not research. While issues such as fairness must be addressed, it is important for researchers to continue to develop results that can be used in the decision making process regarding inclusion for schools, educators, students, and parents.

This research is especially needed at the secondary level due to the fact that the decisions made at that level effect the type and caliper of the diploma sought by the student. These decisions have extremely far reaching implications for older students. Many states are requiring passage of competency tests and more rigorous coursework to be eligible for general education diplomas. Whether or not inclusive environments help or hinder students with mild disabilities in the race to seek such options is an imperative question to answer simply because the stakes are so high. If students who are included do indeed perform better on such tests and are thereby made eligible for more opportunities, then this conclusion needs to be firm within the literature base. However, with the current state of the field, little is known about whether or not inclusion fosters more options for students regarding these criteria. The implications of the potential research in this area are tremendous when the opportunities for the individual students are considered.

<div align="center">References</div>

Barnett, C. & Monda-Amaya, L.E. (1998). Principal's knowledge of and attitudes toward inclusion. *Remedial & Special Education, 19*(3), 181-192.

Boudah, D. J., Schumacher, J. B., Deshler, D. D. (1997). Collaborative instruction: Is it an effective option for inclusion in secondary classrooms? *Learning Disabilities Quarterly, 20*, 293-316.

Carlberg. C. & Kavale, K. (1980). The efficacy of special versus regular class placement for exceptional children: A meta-analysis. *The Journal of Special Education*, *14*(3), 295-309.

Clyde K. v. Puyallup School District, 35 F.3d 1396 (9th Circuit 1994).

Individuals with Disabilities Education Act (1990), 20 U.S.C. §1401 (1997).

Fuchs, D. & Fuchs. L. (1994). Inclusive schools movement and the radicalization of special education

    reform. *Exceptional Children, 60*(4), 294-309.

Gerber, P. & Popp, P. (1999). Consumer perspectives on the collaborative teaching model views of

    students with and without LD and their parents. *Remedial & Special Education, 20*(5), 288-296.

Guterman, B. (1995). The validity of categorical learning disabilities services: The consumer's view.

    Exceptional Children, 62(2).

Jorgensen, C. M. (1995). Essential questions – Inclusive answers. *Educational Leadership*,

    December/January, 52-55.

Lundeen, C. & Lundeen, D. (1993). Effectiveness of mainstreaming with collaborative teaching. Paper:

    Annual Convention of the American Speech-Language-Hearing Association. Anaheim, CA

    November 19-22.

McLeskey, J., Henry, D. & Axelrod, M. I. (1999). Inclusion of students with learning disabilities: An

    examination of data from reports to congress. *Exceptional Children, 66*(1), 55-66.

McLeskey, J., Waldron, N. L., Tak-shing, S. H., Swanson, K., & Loveland, T. (2001). Perspectives of

    teachers toward inclusive school programs. *Teacher Education and Special Education, 24*(2),

    108-115.

Schumacher, J. B., Deshler, D D., Bulgren, J. A., Davis, B., Lentz, B. K. & Grossen, B. (2002). Access of

    adolescents with disabilities to general education curriculum: Myth or reality? *Focus of*

    Exceptional Children, 35(3), 3-16.

Trent, S. (1998). False starts and other dilemmas of a secondary general education collaborative teacher:

    A case study. *Journal of Learning Disabilities, 31*(5), 503-513.

Walsh, J. (1991). Student, teacher, and parent preference for less restrictive special education models:

    Cooperative teaching. Paper: Annual Conference for the Council for Exceptional Children,

    Atlanta, GA, April 6-9, 1991.

Walsh, J. (1993). Cooperative teaching: An effective model for all students. Paper: Annual Conference for the Council for Exceptional Children, San Antonio, TX, April 5-9, 1991.

Walther-Thomas. C., Korinek, L. & McLaughlin, V. L. (1999). Collaboration to support students' success. *Focus on Exceptional Children, 32*(3), 1-18.

Zirkel, P. A. & Gluckman, I. B. (1996). "Full inclusion" of students with disabilities, Part 2. *National Association of Secondary School Principals, 80*(581), 91-93.

Table 1

Perception of Inclusion

Author, Year	Participants	Method	Results
(Barnett & Monda-Amaya, 1998)	115 randomly selected schools of varying levels	Survey	Results indicated that high school principals felt that inclusion may work but their schools were unprepared. No clear definition of inclusion was found. Majority of high school students included are students with LD or EBD.
(Gerber & Popp, 1999)	123 secondary students with and without disabilities Parents of each student	Interview	Students and parents noted benefits for a collaborative teaching model. Increased self-esteem, organizational skills, understanding, and use of learning strategies were noted.
(Guterman, 1995)	9 students with learning disabilities who did not participate in inclusion	Interview	Students reported that they felt stigmatized by their placement in special education pull out, and that they resented the low level curriculum. They did not feel collaboration was the answer to their issues as they were concerned about the amount of negative attention they would receive from the collaborative special education teacher.

(McLeskey et al., 2001)	6 schools and two groups of teachers
	  - 3 schools with inclusion
	  - 3 schools without inclusion
		Survey	Results indicated that teachers all teachers favored inclusion, but teachers in schools that already had inclusive programs had more positive views. Teachers not involved in inclusion had concerns regarding implementation.

(Trent, 1998)	3 pairs of secondary level collaborative teachers	Qualitative case studies Survey	Issues raised include an ambiguous role of the special educator and the ineffectual use of time by the special educator. Benefits cited were increased student organization and increased content area learning for special educator. Called for more planning time and communication between the teachers.
(Walsh, 1991)	4 public secondary schools 97 secondary age students in special education 26 parents of students with disabilities 21 pairs of co-teachers 3 administrators	Survey responses of participants regarding their perceptions of a newly implemented collaborative placement in comparison to their perceptions of the pull-out program of the previous year.	No negative impact from inclusion was found. The students reported many positive implications including increased learning and self-esteem. Both groups of parents and administrators indicated that they felt the collaborative program was successful.

Table 2

Efficacy of Inclusion

Author, Year	Participants	Method	Results

(Boudah et.al., 1997)	8 classrooms grades 6-10 consisting of students with and without disabilities divided into two groups
	    - Teachers in group one (N = 32 students) received instruction regarding integration of strategy instruction
	    - Teachers in group two (N = 23 students) did not receive instruction
		A multiple-probe-across-teams-of-teachers design and a pretest-posttest design were used to evaluate teacher strategy use, student engagement, and student achievement. Time sampling used to measure teacher and student behavior. Student engagement measured through direct observation per occurrence and strategy use measured through direct measures, and achievement measured with class assessments.	Trained teachers spent more time in strategy instruction but less on content instruction. Student engagement was low across groups and phases. Student test scores remained low or decreased. Authors conclude that a lack of teacher engagement results in low achievement and the authors question the "usefulness and outcomes of collaborative instruction."

(Lundeen & Lundeen, 1995)	318 secondary students both with mild disabilities and without disabilities enrolled in collaborative classrooms	Quantitatively compared achievement measures including class grades and reading comprehension scores of students with disabilities to students without.	Students with disabilities demonstrated grades commensurate with peers despite lower reading comprehension scores. Students with disabilities demonstrated higher grades in inclusive environments when compared to grades from more restrictive placements the previous year.

(Schumacher et.al., 2002)	9 high schools included students with and without disabilities, parents, teachers, and administrators	Qualitative and Quantitative including interviews, surveys, and comparison of standardized test scores	The more support the school had for students the more students were included. Low amount of student engagement by special education teachers. Reading levels of text books 5-7 grades above that of students. In order for inclusion to be successful more research driven practices are needed as well as information on which students should be included.
(Walsh & Snyder, 1993)	343 secondary students both with and without mild disabilities enrolled in a collaborative environment 363 students both with a without disabilities in a traditional environment with on teacher	Quantitative comparison of final grades, state competency test scores	No differences on the final class grades. Students in an inclusive environment had higher passage rates on state competency tests