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Generalization of Organizational
Skills from One Setting
to Another

by

Kristine J. Jansen

A Thesis

Submitted in partial fulfillment of the requirements
of the Master of Arts Degree in the Graduate
Division of Rowan College

Approved by _____ Professor

Date Approved 5/11/95

ABSTRACT

Kristine J. Jansen
Generalization of Organizational Skills from
One Setting to Another
1995
Dr. S. Jay Kuder
Special Education

Learning disabled students have consistently had difficulty generalizing organizational skills from a resource center, where the skills are taught, to a mainstream classroom without support. This study hypothesized that organizational skills taught in a mainstream classroom with resource support (inclusion) would generalize more frequently to a mainstream classroom without resource support, than skills taught in the resource center. Ten seventh grade students with learning disabilities were taught strategies for organizing themselves to complete classwork and homework, keep an organized notebook and come prepared to class. Mainstream classroom teachers felt these four skills were necessary for students to become successful in the mainstream without support. Pre and post intervention data was collected for all four organizational skills, in five academic subjects (three inclusion and two mainstream). This data was averaged

and means were compared. The results indicate that learning disabled students have difficulty generalizing organizational skills from one setting to another, even when the two settings are more similar than the resource center and the mainstream classroom. Since these organizational skills are deemed necessary by teachers, for students to be successful, students need to be provided with practice and prompts for strategies in all instructional settings.

MINI-ABSTRACT

Kristine J. Jansen
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Ten learning disabled students were taught organizational skill strategies in a mainstream classroom with resource support (inclusion). It was hypothesized that organizational skills would generalize more frequently to the mainstream. Comparison of pre and post data indicated that students have difficulty generalizing skills to a different setting.

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Kristine J. Jansen

Chapter 1
Hypothesis and Research
Question

Chapter 1: Hypothesis and Research Question

The inclusive classroom setting provides students with a setting that is more comparable to their mainstream classes. Therefore, an inclusive classroom is a more logical situation in which to teach organizational skills than the resource center. Schmidt (1983) suggests in his article, that organizational skills can be transferred from the resource center to the mainstream with a high degree of positive results if the skills are taught in an organized structure. This study suggests that the skills will generalize from one setting to another more frequently when the settings are congruent as possible. This is because the inclusive setting, a mainstream classroom with resource support, has many more similarities to mainstream classes without support. Therefore, skills taught in the inclusive setting should generalize with a high degree of success in the mainstream without support.

This study will investigate whether organizational skills taught in one classroom setting can be

generalized to another classroom. The importance of generalized skills can be measured by student success in the mainstream, which leads to a better academic performance.

Question:

Is it possible that the organizational skills middle school, learning disabled students are taught in a mainstream class with resource support will generalize to a mainstream classroom without resource support?

Hypothesis:

It is hypothesized that organizational skills of middle school, learning disabled students that are taught in a mainstream class with resource support will generalize to other mainstream classes without resource support.

Organizational skills are defined to include the following skills and abilities:

- (1) Organizing notebook immediately
 - copying daily log
 - putting papers into the proper section
- (2) Bringing all materials to class everyday
 - notebook
 - textbook
 - assignment book
 - pen/pencil
 - anything extra required by the teacher

- (3) Using time wisely to complete homework regularly
- (4) Uses classroom time appropriately
 - completes classwork assignments within given time
 - begins homework when time allows
 - stays on task

A mainstream classroom with resource support includes the following characteristics (also called inclusion): An English, math or reading class with one subject area teacher and one resource center teacher. Learning disabled students are included within a heterogeneously mixed group of seventh graders.

The significance of this research question is dependent upon two factors. The first factor concerns organizational skills and their generalizability to mainstream classes. The second factor concerns the inclusive classroom setting.

Chapter 2
Literature Review

Chapter 2: Literature Review

The goal of special education for learning disabled students, according to Deshler (1984), is to make learning disabled students independent learners, so that they can learn the required material in whatever situation they find themselves. Being organized within the specific situation is key to achieving this goal. Locke and Abbey (1989) found learning disabled students do not typically develop strategies in an independent matter. Students struggling with academics, which includes a large percentage of the learning disabled population, fail to develop organizational skills (Harries, 1986).

Improving Organizational Skills

Being an organized student is not just one ability, it consists of several underlying skills. The following skills are prerequisites necessary to achieving organization: categorizing, following routines, breaking tasks into parts, sequencing, managing time, exploring

options and making decisions. Repeated practice in each of these areas will help to increase learning disabled students' overall ability to become organized (Slade, 1986). Harries (1986) agrees and has found that the following strategies are useful for teaching organizational skills to resource center students. Also Slade (1986) states that students should have a set routine while in the resource center. They need to be shown how to organize space. "Clean-up" time is also essential to making organizational skills part of the routine. Time management skills, proofreading and checking techniques should be taught, modeled and encouraged.

Students who have difficulty organizing their environment often misplace personal belongings, forget to complete tasks and have a day to day variation in remembering previously learned material. There is also a lack of understanding for how to set aside, plan and arrange the time between when the assignment is given and the due date (Haman, 1985). Students need to be taught that different tasks demand different amounts of time. Complex tasks should be broken down; this process should be demonstrated and practiced. Replacing long, involved directions with key words is a good strategy

for students in the mainstream, and once again needs to be practiced (Slade, 1986).

Learning disabled students' ability to organize themselves becomes a problem when factors change from one instructional setting to another. Although students may have repeated practice in a prerequisite skill, the skill will most likely be unused in a setting different from the one in which the skill was learned (Slade, 1984). Much of the research makes the following suggestions to help students use organizational skills in many instructional settings. It is important to help students identify situations and the expectations of those situations, and list the required activities, including the specific skills needed to perform the activities. It is also beneficial to help the student list the skills he has already mastered. Students need to be taught techniques to help them be successfully organized in mainstream classes, and the problem intensifies as the number of mainstream classes increases. Color coded notebooks and folders are one solution to this problem. Often different materials are required on different days, such as "test days" or "free days". List on the inside of notebooks may help combat this problem. Students should be allowed an opportunity

to practice what is needed for different situations (Walther, Chriss & Carter, 1993).

Students with learning disabilities have trouble organizing schoolwork for success. They have difficulty organizing a set of materials, rearranging information to produce an organized structure, breaking an assignment down into organized tasks and organizing multiple tasks (Webber, 1993). Shields and Heron (1989) discuss five strategies to improve organization skills: assignment logs and charts, work stations, color coding materials, and guided notes. The authors also discuss several strategies that will promote generalization of organizational skills: reinforcement feedback, home-school communication and self-management programs. Graham and Freeman (1986) agree that self-control procedures can be effective to promote skills. Finally, Shields and Heron agree that to maximize generalization, students need many settings in which to practice the skills. Therefore middle schools and high schools that practice strategies consistently across all classrooms, have a better opportunity for the generalization of organizational skills.

Enhancing Generalization

Locke and Abbey (1989) define generalization as the extent to which a student uses and effectively adapts a skill outside the setting in which it was learned. It is important the students can identify situations in which the skills are appropriate to ensure generalization (Deshler, 1984). Generalization has also been defined as the occurrence of relevant behavior under different non-training conditions without the scheduling of the same events in those conditions as had been scheduled in the training condition. There are, however, levels of generalization that can be thought of in terms of difficulty. The first level is the generalization of responses within the setting and under direct control. Next is the generalization of responses outside the training setting, but under some influence. The final level is the generalization of responses outside the training setting and apart from any teacher influence (Locke & Abbey, 1989).

Gelheiser, Shepard & Wozniak (1986) studied mildly handicapped students and found good and bad strategies for inducing skill transfer or generalization. In this study two short-term strategy training programs were developed. Twenty-one learning disabled students, aged

9 -12, participated in each training program. The first strategy consisted of three rules to aid an organizational strategy: sort the items into groups to study, study one group at a time and study by naming items over and over again. The second study was a six rule program which included self-regulatory skills. Students were taught the three rules for content, as described above and also the following three study rules: count the number of groups and items per group, test yourself during study and recall, cue yourself by saying the name of each group before naming items from it.

Prior to study, students were pre-tested. Instruction began by reading the rules to students and modeling how they are used. Students then recited the rules and applied them to sets of categorizable words and pictures. Because previous research had proven to be successful, students were given relatively easy materials and more difficult materials were gradually introduced. The first program was taught and practiced in three lessons because prior research had shown this would provide enough practice to master the strategy content. During both studies, students were prompted when they forgot to apply rules and feedback was given

when strategies were used. To encourage students to self monitor, they were not given feedback about the number of items recalled.

Students were given a transfer test for facts from a passage one week after instruction. There was no evidence of either the 3 or 6 rule instruction programs being transferred. A more congruent task, memorizing a set of words was then given to check mastery. This demonstrated that many students, especially those taught the six rule strategy, had not achieved mastery. A second transfer test was given to seven students from each group who had shown some maintenance of the rules. They were given a passage with paragraphs marked by sub-headings and this time there was some evidence of transfer, especially in those students who had only learned three rules.

This study found that generalization is more likely to occur when strategies are taught with as few rules or steps as possible. The authors determined three to be the optimal number. Students were also not prepared to generalize skills because they were barely familiar with the skill. The solution to this problem was to employ instructional scaffolding to help students learn the skill. Scaffolding allows the student to achieve

gradual success. Graphing student progress was another strategy that increased the likelihood of generalization, as well as immediate feedback from the teacher while the skill was being learned. Students should be allowed to learn to recognize aspects of a new skill in a new learning situation.

"A true test of the instruction provided in special education classrooms is the degree to which the learning is generalized to other settings, such as the regular classroom." (Schmidt, 1983) Schmidt suggests three steps to promote generalization, because he says many teachers follow a "train and hope" approach to generalization. Successful generalization includes orientation, activation and co-operative planning. Orientation involves three steps: a cue for a strategy (index card), a list of situations where strategy may be applicable, and a review of completed mainstream assignments to discuss how strategy could improve assignment. Activation is a process that allows students to practice assignments, similar to those given in the mainstream, in the resource center, while modeling the steps of the strategy. Co-operative planning requires the resource center teacher to confer with students' regular education teachers about skills

the student has learned and should use in the mainstream. Graham and Freeman (1986) indicate that without a great deal of training, many learning disabled students will use strategies only when instructional prompts are available. Finally, Schmidt states that many times all that was needed to generalize, was verbal permission from the mainstream teacher for the learning disabled student to use the strategy.

Much of the research suggests that generalization is most likely to be achieved if students are taught strategies in small, sequential steps with an opportunity for practice and an ability to identify other situations to use the strategies. Tirapelle and Cipani (1992) reported a positive finding from their research. These results showed that those skills tested and observed generalized across various settings. However, there is also some evidence from Deshler (1984) that out of setting generalization was inconsistently or poorly achieved by almost all the students they studied. Smith, D. (1988) have also found some evidence to suggest that research data shows little or no generalization of skills from the resource room to the mainstream.

School failure may not only be a result of academic difficulties, but also a student's ineffectiveness in meeting the demands of the school environment. Calhoun and Beattie (1987) conducted a study that used a "Naturalistic Emergent Design", with the focus on discovery and explanation. They found that often students with learning problems develop defensive coping skills and "learned helplessness" as a way of compensating for disabilities. This factor lead to a student's inability to do his best on an assigned task. These researchers found the most difficult organizational skills for this type student were being prepared for class, note taking and test taking. Many students who did not bring the required materials, lacked a problem solving ability. Test taking is a problem for learning disabled students because of the high level of test anxiety and the lack of knowledge about answering certain types of questions. Finally, learning disabled students often lack an ability to be in the right place at the right time. Calhoun and Beattie (1987) suggest in their discussion that direct instruction and promoting the transfer of skills could be effective. To increase the effectiveness, IEP's

should state these goals and who is responsible for implementation.

Finally, research in the field of adolescent learning disabilities, relative to academic and cognitive interventions is in it's infancy, relative to the research in other fields. And much of the research focuses on recommended research instead of actual findings. Unfortunately, little empirical evidence exists on the effectiveness of procedures to generalize skills with learning disabled adolescents. Most studies focus on the inconsistencies in generalizing skills across setting, and never suggest any strategies for improving what has been examined.

Chapter 3
Research Design

Chapter 3: Research Design

The generalization of organizational skills from a mainstream classroom with support to a mainstream classroom without support were studied in a middle schools setting with seventh graders. The learning disabled students' organizational skill problems were identified by using a rating scale to identify a child's sequential and organizational interactions within his environment (Haman, 1985). Then strategies were taught and the generalization to mainstream classes was studied using a pre and post test design. Self-management skills were implemented with the students to monitor progress within the mainstream classes.

Subjects:

Ten students classified as learning disabled, who spend at least one 45 minute period a day in a mainstream classroom with resource support, participated in the study. Three of the students were female; the other seven were male. All subjects were enrolled in the seventh grade. Learning disabilities are defined in the

New Jersey code as a severe discrepancy between the pupil's current achievement and intellectual ability in one or more of the following areas: basic reading skills, reading comprehension, oral expression, listening comprehension, mathematic computation, mathematic reasoning and written expression.

Setting:

This study was completed in a sixth to eighth grade middle school, in an upper-middle class township. There were 300 students in the seventh grade. The seventh grade was divided into three teams of five teachers each. The mainstream classes with resource support were English, math and reading. Students did not receive support in social studies or science. Class sizes range from 24-27 and classes were heterogeneously grouped. Classes were 45 minutes in length, for each academic subject.

The support is provided by a special education, resource center teacher. The teacher provided support to classified students first, but also the rest of the class. She provided students with individual reinforcement of skills, assistance in class projects and specific techniques and strategies needed to be successful in the mainstream. These strategies include

taking good notes, studying effectively, developing organizational skills and preparing yourself, as a student, for what is needed to be successful in different academic settings (teaching students to cope with the demands of many teachers).

Instruments:

Students' organizational skill deficits were assessed using a rating scale (Haman, 1985; Appendix A). This assessment was used to determine what organizational skills were weak and needed to be taught to the students. The rating scale lists 26 items which are concerned with a child's sequential and organizational skills in his environment. These items were deemed important by research which studied what skills are necessary for a child to be academically successful. Each item is checked off according to the teacher's observations and impressions of the student. If a teacher checks a total of 9 or more statements, this is a good indicator the student may be having difficulty functioning in the environment in an organized manner. The rating scale was chosen because it was a quick, effective measure for teachers to evaluate organizational skills.

The generalization of organizational skills was measured by using and pre and post test design. The ability for a student to complete homework, come prepared to class, organize a notebook, and complete classwork was measured before any intervention took place. These skills were measured by taking averages for a two week period in the mainstream classrooms with support and the mainstream classrooms without support. Teaching of strategies and modeling were used to help students develop strategies. Students were given two weeks to use skills they had been taught in both settings without reminders. After two weeks the same four averages were figured.

Procedure:

Students classified as learning disabled and enrolled in an inclusive setting (mainstream with resource support) were identified as possible subjects. These students were administered the rating scale to determine if they had any organizational skill deficits. Those students with nine or more checks were slated to participate in the study.

The organizational skills deemed important for academic success were keeping an organized notebook, by copying the daily log and putting notes and handouts in

an organized and neat order, and bringing all needed materials to class. A student's ability to use classroom time efficiently to complete work was also studied using specific strategies to increase on-task time.

Students were taught three strategies for strengthening organizational skills. The first strategy concerned using in class time productively to complete classwork assignments. This was measured through the classwork average. This classwork strategy consisted of three rules:

- (1) The student defines or explains the classwork assignment in writing and in his own words.
- (2) The student lists the steps he thinks are necessary to complete the task. This list was checked and discussed when students first attempted the strategy.
- (3) The student checks off each step as he completes it.

The skill was modeled on two occasions for the students. Then the students were reminded to use the skill and given feedback about their ability to use the strategy. They practiced three times with support and feedback and

then a discussion was initiated about how this strategy could be used in other settings. Finally students used the strategy independently.

The second strategy helped students develop a system that would give them the greatest opportunity to complete homework. Again three steps were taught and modeled, then the students practiced with feedback and reinforcement and finally students used the skill without any feedback. Immediately before the final step a discussion was initiated to promote generalization across settings. The three steps taught to increase the probability homework would be completed on time were:

- (1) copy homework in assignment book as soon as assigned
- (2) put needed materials in book bag before the end class
- (3) leave the materials in the bag all day

The final strategy was designed to help students learn how to come to class prepared. This means bringing all materials required by the teacher. Students with organizational difficulties find this difficult because of the variety of materials required in different situations and on different days. Students were first taken to clean out their lockers and have a

"fresh start". Role playing was then used to demonstrate how to organize materials in a locker, in a book bag and in class. Students were given a chance to role play what works for them. A discussion was initiated to help students see that different strategies work for different people. Students wrote in journals to explain their personal strategies for locker, book bag and class organizational. This strategy was practiced daily for five days with praise and feedback. After that teacher kept track of student preparation for class for two weeks.

Analysis:

This study examined learning disabled students' ability to generalize organizational skills taught in the inclusive setting to the mainstream classes.

Chapter 4:
Presentation and Analysis
of Data

Chapter 4: Presentation and Analysis of Data

The purpose of this study was to investigate the ability of learning disabled seventh graders to generalize specific organizational skills from a mainstream classroom with resource support (inclusion) to a mainstream classroom without resource support. Specific strategies were taught in the areas of organizing a notebook, using time wisely to complete classwork, helping the students organize themselves to bring all needed materials to class and needed materials home for homework.

Pre and post intervention averages and grades were collected and compared for all ten students in five academic subjects. Three of these subjects (English, math, and reading) were classified as mainstream subjects with resource support (inclusion), and the other two (social studies and science) were mainstream classes without support because there was no resource center teacher available during the class period to assist the students.

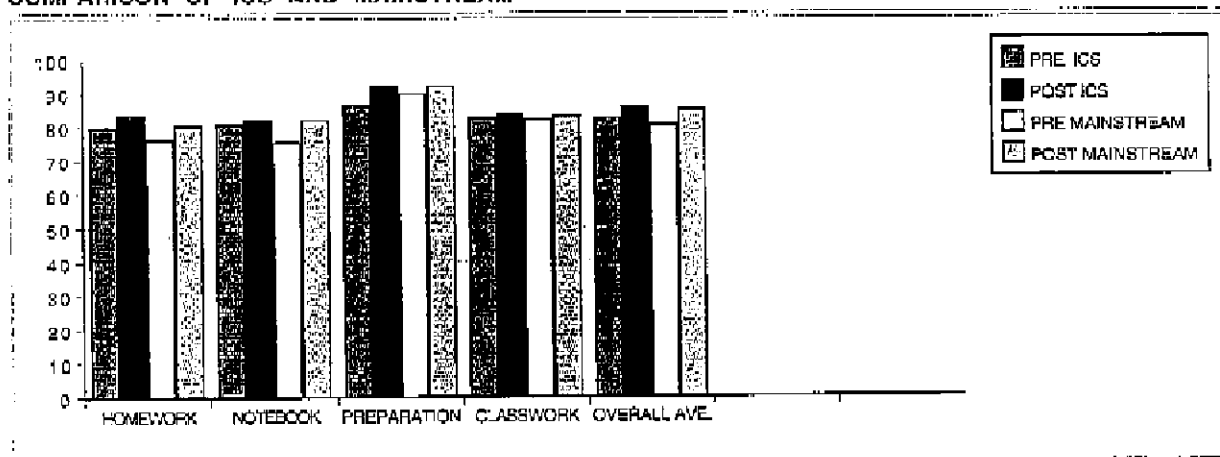
The research question was investigated by comparing the pre and post results of the three inclusion classes and the two mainstream classes without support in all four organizational skill areas. These results are presented in Table 1. Because of the amount of data collected and available for comparison, the researcher also felt it was worthwhile to examine and report the pre and post intervention data in the four organizational skill areas, for all five academic subjects.

The most important data needed to answer the research question is found in Table 1. The table graphically compares the gains and losses in overall mean scores between inclusion and mainstream, for the four organizational skill areas. By examining the table it is possible to conclude the students had gains in mean scores ranging from 0.6% to 6.5% in the mainstream classroom without support. This is the setting that needed to be examined to determine if generalization of skills occurred. There was an average increase of 3.2%. would not be a considered significant change in pre and post intervention means. Also the overall mean for all four organizational skill areas, when averaged together, showed an increase of 3.2%. Notebook organization had

the greatest increase of 6.5 points. Again this is not an overall significant change, but all nine students in social studies and six students in science saw a better post notebook grade.

TABLE 1

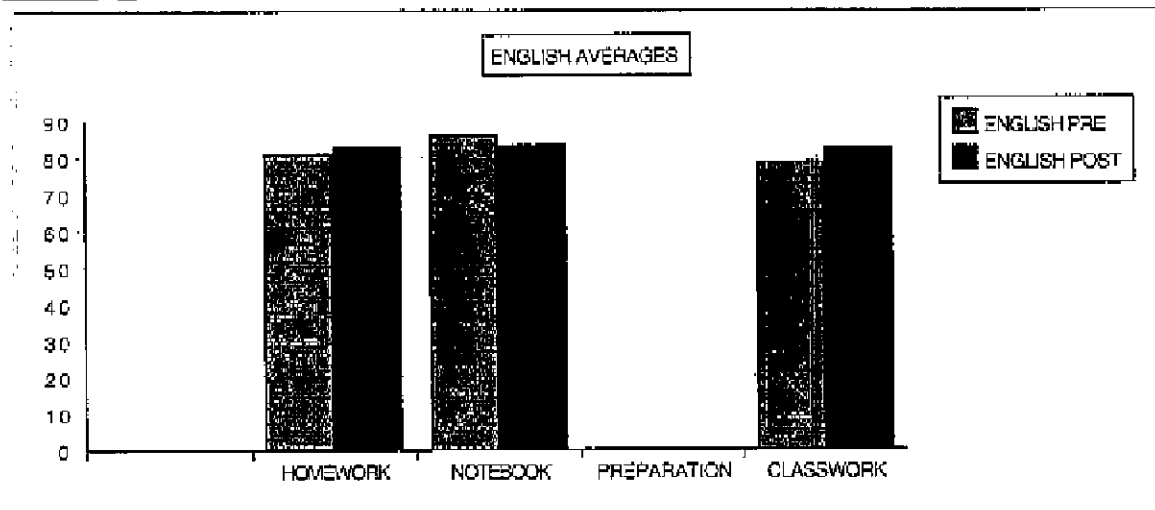
COMPARISON OF ICS AND MAINSTREAM



The means for English, a mainstream classroom with resource support (ICS), are shown in Table 2. Scores for all of the students were taken during pre and post intervention in three organizational skill areas: homework, notebook and classwork. The English teacher and in-class support teacher did not give a grade for preparation, therefore no scores were reported. Classwork showed the most growth, from a mean of 78.8 to 83. Seven students increased their averages. There was relatively little growth in homework averages, from 81.1 to 83. Five students did increase their individual

average. There was a decrease in the pre and post intervention means for notebook organization from 86.6 to 83.3. Four students increased their score.

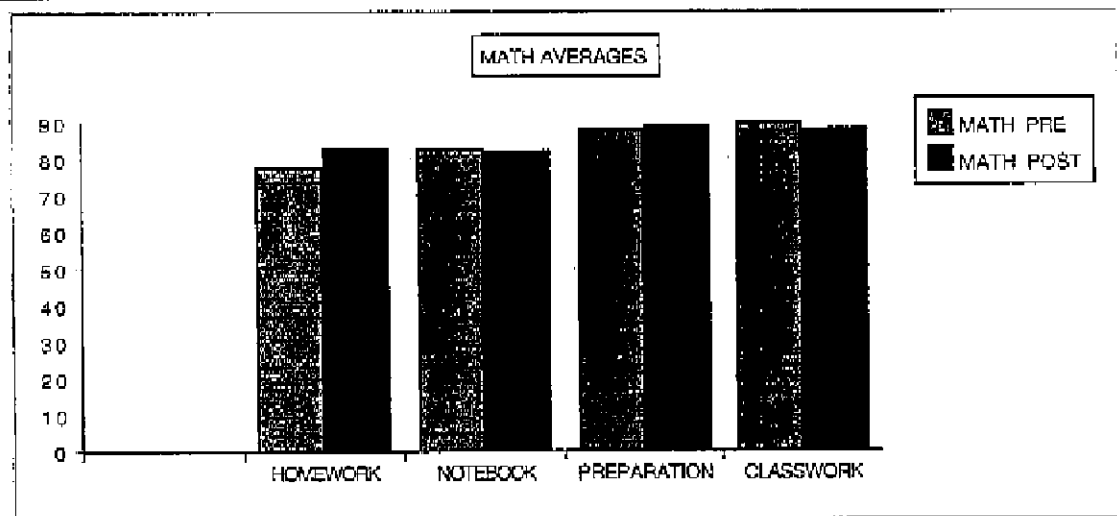
TABLE 2



The means for math, a mainstream class with resource support (ICS) are shown in Table 3. Scores for all students were taken in homework. Only six students were scored in notebook and preparation and four students in classwork organizational skills. These subgroups were the result of different teacher's class requirements. There was no mean difference in the notebook average (82.7 to 82.5) and a mean loss in classwork from a pre average of 89.9 to 88. A slight gain was noted in preparation with a mean increase from 88 to 89.2. These small decreases and increases are statistically insignificant. Eight of the nine students

either increased their homework average or were able to maintain their pre-intervention average. This resulted in the largest gain in homework. The pre intervention mean was 77.7 and the post intervention mean was 82.8, a gain of 4.9 points overall.

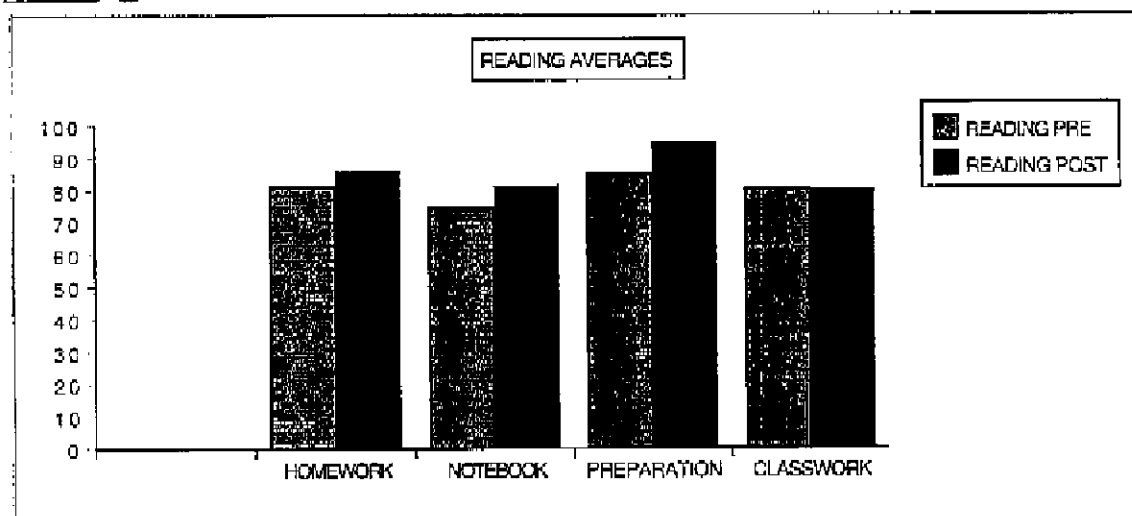
TABLE 3



The results of pre and post intervention data for reading, a mainstream class with resource support are shown in Table 4. Reading had the greatest mean increase of all five academic subjects. All students were studied in the organizational skill areas of homework and classwork, but because of different teacher requirements a subgroup of seven was used for notebook organization and a subgroup of four was used for examining preparation for reading class. The pre and post intervention means for classwork were relatively

unchanged (80.4 to 80.3), although six of nine students were able to increase their average. The other three organizational skill areas had mean increases: homework, 81.2 to 83.6; notebook, 74.6 to 81.6; and preparation, 85.5 to 94.8. It is important to note all students in the preparation subgroup had improved their averages for the post intervention data.

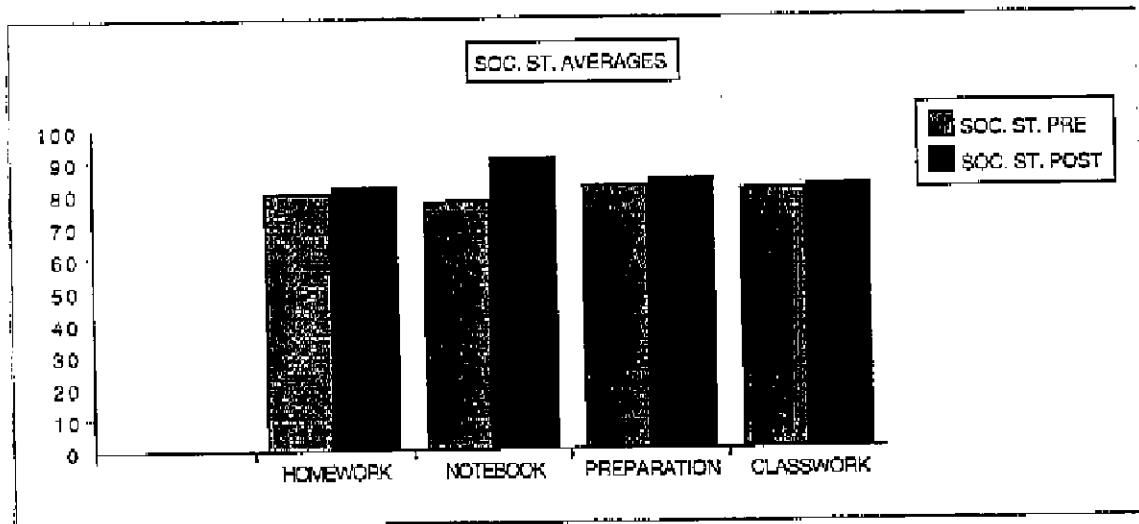
TABLE 4



Pre and post intervention for social studies, a mainstream class without resource support, are graphically shown in Table 5. From the table it can be concluded that students had at least slight mean increases from pre and post intervention data collection, in all four organizational skill areas. Homework and classwork data was collected for all nine students. The homework mean was 79.9 and increased to

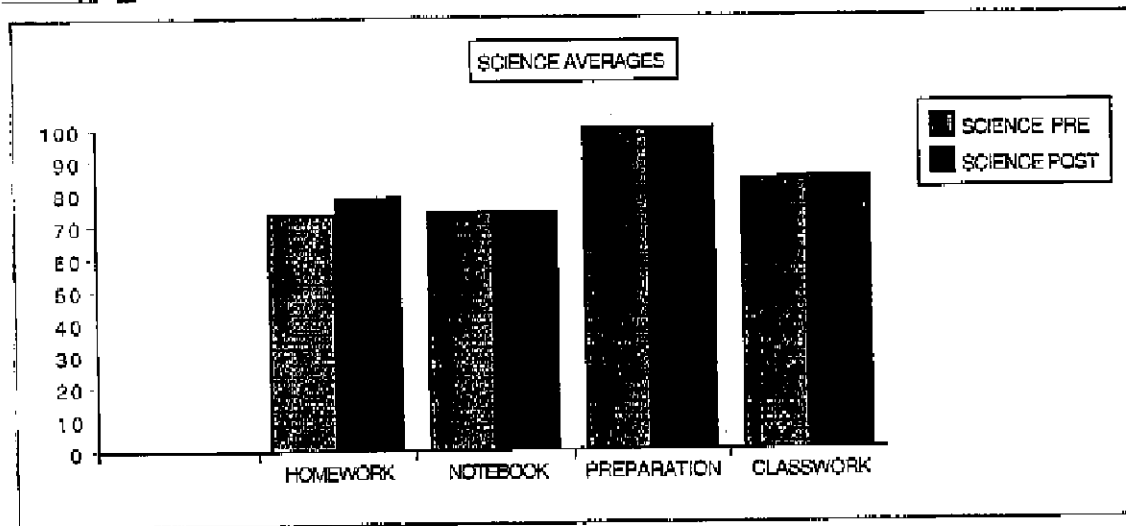
82.2, post intervention; seven of the nine students earned post intervention averages that were equal to or greater than pre intervention averages. Eight of the nine students were able to increase their post intervention averages in classwork, although the table shows a mean increase of only 0.8% (81 to 81.8). One student earned a zero for post intervention and a 95 as a pre intervention average. A subgroup of eight students were studied for the notebook averages, which increased from 77.5 to 90.4, an increase of 12.9 percentage points. Also all eight students were able to increase their mean score for post intervention data collection. The preparation mean increase was from 81.7 to 84 for the subgroup of six students.

TABLE 5



The results for science, a mainstream class without resource support, are shown in Table 6. Notebook, preparation and classwork showed no change or an extremely small change from pre to post intervention data collection, and can be seen on Table 6. Preparation and classwork were subgroups of six students out of nine. Although no notable changes were present, all students were able to maintain their grade for those three organizational skill areas. The means for homework did increase from 73.4 to 78.6. Six students who were able to earn higher averages.

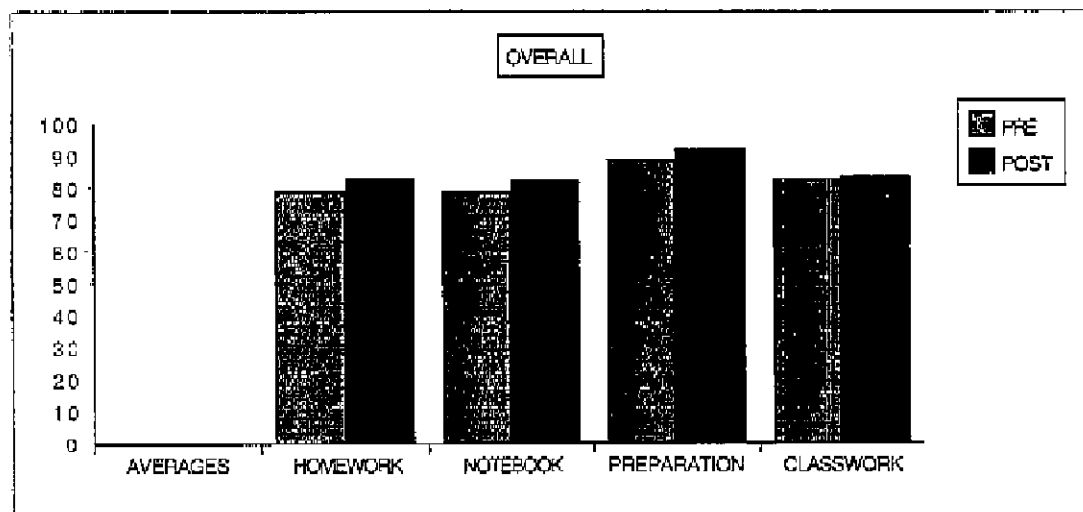
TABLE 6



Although the purpose of this study was to examine if organizational skills will generalize from a mainstream classroom with support (ICS) to a mainstream classroom without support, and this was discussed in

Table 1, the researcher felt it was necessary to investigate whether any significant mean increases were present overall. Table 7, shows pre and post intervention data for all five subjects averaged together. From examining the table the general trend that was apparent in all of the previous tables, including Table 1, which dealt directly with the research question, can be seen. There was not a significant mean increase from pre intervention to post intervention in any organizational skill area or specific subject area.

TABLE 7



Chapter 5

Discussion

Chapter 5: Discussion

Schmidt (1983) has concluded that organizational skills taught in a resource center generalize to a mainstream classroom with a high degree of positive results if the skills are taught in a highly structured manner. This study investigated the generalization of organizational skills in an inclusive setting, a mainstream classroom setting with resource center support, to a mainstream classroom without resource support. It was hypothesized that because an inclusive setting is the most like a mainstream classroom without resource support, organizational skills should generalize with a greater degree of success than skills taught in the resource center.

Examination of the pre and post intervention mean scores indicate that organizational skills of learning disabled students taught in an inclusive classroom setting do not generalize to a mainstream classroom without resource support. Although analysis of Table 1, page shows mean increases for all four organizational

areas from pre to post intervention data collection, the difference was not great enough to be considered significant. Therefore it can not be concluded that organizational skills will generalize from one setting to another under the parameters given for this research study.

The mean gains were not significant and did not demonstrate generalization from the mainstream classroom with resource support to the mainstream classroom without resource support, but there were some significant gains for individual students. The majority of students were able to maintain their pre intervention scores or increase them. Students showed the most gain in the following areas. Math had important results for at least half of the students in all four organizational skill areas. Eight out of nine students were able to increase or maintain their homework average and five out of six students had positive results in preparation. Half of the group was also able to achieve positive results in the areas of organizing a notebook and preparing for class. The results for English were interesting and very rewarding for five students who were able to maintain or increase scores in the three organizational skills that were taught to them.

Reading also had some uplifting results for the students in all four organizational skill areas. All students were able to increase their preparation grade. Two-thirds of the group had better post intervention classwork grades. Five out of nine students were successful in homework strategies, and five out of seven students earned higher notebook grade for the post intervention data collection.

In social studies class the classwork and notebook strategies seemed to be the most effective because all but one student in each areas earned a higher score. Seven out of nine students used homework strategies successfully, and three out of five students increased their score in preparation. Although the difference between pre and post intervention means is not great, with this high proportion of students receiving better scores in this setting, which is without support, it would seem that the students are generalizing the organizational skills from one setting to the other.

In the science class, another mainstream class without resource support, there was also a high proportion of students who were able to maintain or increase their scores. Seven out of nine students were successful with homework. Two-thirds had better

notebook grades, and half of the students earned higher scores in classwork.

All of the above information about the number of students who received higher post intervention scores makes it difficult to say that at least some of the students did not benefit from the strategies for organizational skills. Even though all of the tables that compare the pre and post intervention data do not show great increases in means, many students were successful in at least some of the areas. This should not be overlooked.

The result that was expected by the hypothesis did not occur when examining the tables and there are several reasons these results may have appeared to suggest generalization is not possible. First, the sample size was small. Ten students were identified by the organizational skills checklist (Appendix) for this study. It is important to note that after post intervention data was collected the researcher decided one male student needed to be deleted from the sample. The student had many personal problems while post intervention data was being compiled. When his scores were reported, he had lower scores than during collection of pre intervention data and zeros for seven

of the possible twenty measures. These zeros skewed the mean scores significantly. Therefore the researcher felt confident in her decision to drop the subject from the study. In doing so the researcher did not destroy the validity of the research. Also one male student earned a pre intervention score of 95 and a post intervention score of 0 for social studies classwork. This could have skewed that particular mean.

Another reason generalization may not have occurred could be a result of the design of the experiment. Students were more successful using the techniques taught in the ICS setting, for organizational skills. If there had been some prompt given in mainstream classes without support before post intervention results were collected, students may have understood when and how to use a strategy in a setting other than the one in which the strategy had been taught. Graham and Freeman (1986) have also found that learning disabled students will only use strategies when they are prompted to do so.

Many previous studies have found inconclusive research to support generalization from one setting to another. Deshler (1984) and Smith, D. (1988) both concluded that out of setting generalization was

inconsistently achieved by almost all of the students they studied. These studies support the overall findings of this research. The difference between pre and post intervention means was not significant, but the number of students who were able to earn a better grade for post intervention data collection was significant. More than half of the students achieved a higher post score. This has several implications for instruction.

Teaching organizational skills has many positive benefits for students to increase their ability to be successful in academic settings. Giving students more opportunity to practice organizational skills and monitor their success before they are expected to generalize may increase results. Also asking mainstream teachers to provide prompts when resource center teachers are not present will help students decide and learn when skills are appropriate to use.

Finally, although the results of this study seem to negate the hypothesis, several positive ideas and suggestions have developed. First, studies on adolescent learning disabled students have not been conducted to the extent other areas have been studied. Because of this, every study on this population is important no matter the findings. With several simple

modifications to this study that were previously mentioned, it may be possible to sufficiently provide situations for more students to be successful. And since inclusion is the trend in special education, this research in an inclusion setting has provided an opportunity to study a situation more learning disabled students will be faced with in the future.

Appendix**ORGANIZATIONAL CHECKLIST**

If the teacher checks nine or more statements, the student is having organizational difficulties.

The student

1. has a desk or locker which is in constant disarray. _____
2. loses things (e.g. pencils, notebooks/books, jackets). _____
3. doesn't hand in assignments on time. _____
4. is frequently late for class. _____
5. is not prepared to leave the room when other students are. _____
6. forgets to do homework. _____
7. forgets to do parts of assignments. _____
8. forgets to take things home from school. _____
9. does not bring things (e.g. notes, homework) to school from home. _____
10. has a reason or excuse for forgetfulness or nonperformance. _____
11. does not like art activities _____
12. appears awkward or clumsy. (For example, the student is not proficient in gross motor activities, such as ball throwing.) _____
13. has trouble with writing tasks. _____
14. has trouble completing a worksheet in a logical sequence. _____
15. doesn't do assigned work during independent study time. _____
16. has difficulty remembering daily work schedule. _____
17. doesn't remember the weekly school routine schedule. _____
18. makes irrelevant comments during class discussions and during general conversation. _____
19. does not relate events or experiences in a logical sequence. _____
20. does not properly place words on the line when writing. _____
21. omits words when writing. _____

22. has difficult in spelling words. (For example, the student omits letters in words, or turns letters around in words such as "braed" for "bread" or "rae" for "are.") _____
23. in mathematics calculations, omits necessary steps to complete a process. _____
24. in mathematics calculations, doesn't write the numbers in proper alignment. _____
 Example:
- | | | |
|------------|-----|-------------|
| 249 | | 249 |
| <u>-41</u> | for | <u>- 41</u> |
25. has difficulty understanding the cardinal directions: north, south, east, west _____
26. confuses directions left and right. _____

Taken from: Sharpening Organizational Skills, Academic Therapy, Haman & Isaacson (1985).

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