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ABSTRACT

This study examined the effects of grouping students by ability or achievement on middle school students' academic achievement. Mathematics achievement scores from the California Test of Basic Skills (CTBS) were obtained from 25 seventh graders randomly selected from a group of 80 who had received instruction in an ability-grouped setting for mathematics instruction during third grade and in an inclusive setting during the sixth grade. The mathematics scores in the third grade ability-grouped setting were compared to those from the sixth grade inclusive setting. Also, a written survey was completed by kindergarten through eighth grade teachers in five elementary schools and one middle school. Mathematics achievement results indicated that there was no significant difference between math scores in the third grade ability-grouped setting and the sixth grade inclusive setting. Teacher survey results revealed that while most teachers have moved away from rigid forms of ability grouping, some still group for subjects such as reading and mathematics. Those who still group students by ability revealed that they continue this practice because they believe that delivery of instruction is easier when students are on the same instructional level. Students' previous grades, current test scores, and teacher perceptions were used to group students by ability. Teachers who had moved away from grouping indicated that the transition was made easier by employing alternative methods and styles of instruction--especially a multisensory approach--but also including cooperative learning and mastery learning. (Five appendices include t-test data and a copy of the survey. Contains 31 references.) (Author/KB)

A STUDY OF THE EFFECTIVENESS OF ABILITY GROUPING ON THE ACADEMIC ACHIEVEMENT OF MIDDLE SCHOOL STUDENTS

A Thesis

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Master of Arts in Education

by

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This thesis submitted by Barbara G. Phares has been approved meeting the research requirements for the Master of Arts Degree.

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Abstract

Homogeneous grouping, the practice of grouping students by similar ability or achievement is one of the most universal and debatable practices in education. This study summarizes research results on the long term effects of this practice on the academic achievement of middle school students. Effects are reported in four categories : (1) academic achievement, (2) exposure of material and the opportunity to learn, (3) tracking practices, and (4) alternative methods and adaptations to grouping. Results indicate inequities in student achievement, classroom opportunities for low-track students, and the attitudes and instructional procedures utilized by teachers with the different tracks of students. Studies indicate that homogeneous grouping generally fails to increase learning and often widens the gap between students believed to be more or less able. Research on tracking practices indicate that once students are placed in a track they rarely are given the opportunity to move to a different track. Studies reveal many alternative methods of grouping and instructional methods and adaptations teachers can employ to discontinue the rigid forms of ability grouping.

Statistics from a survey conducted in Randolph County Schools indicated that while most teachers have moved away from the rigid forms of ability grouping, some still group for subjects such as Reading and Math. Those who still group students by ability revealed they continue this

practice because they feel the delivery of instruction is easier when students are on the same instructional level.

Teachers who have moved away from grouping students by academic ability indicated that the transition was made easier by employing alternative methods and styles of instruction. While most instruction in the past was delivered through a combination of lecture and hand outs, teachers noted the more favorable form of instruction now is the multisensory approach since all learners benefit from a combination of auditory, visual, and hands on learning. Educators have also begun to incorporate new styles of instruction such as cooperative learning and mastery learning which aids in the success for all learners.

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Chapter 1

Introduction

Ability grouping implies grouping students for instructional activities by ability or achievement to create the greatest amount of homogeneity among learners. The rationale according to Manning and Lucking has been that grouping students for instruction decreases the differences among learners' knowledge, skills, developmental stages and learning rates. Rather than risk too much learner heterogeneity and have a lesson be too easy or too difficult for some learners, teachers assume that learners can be grouped according to an established criterion such as previous ability and achievement and that they all can profit from one lesson (14:254).

This dilemma, as reported above by Manning and Lucking, of deciding the most effective means of grouping students for learning activities has been a controversial issue for decades. The first reported practice of grouping students by intellectual ability or academic achievement began in 1867 in St. Louis, Missouri. This practice still continues today in American schools despite research which show the negative consequences and ineffectiveness (14:254).

Seventy years of research as reported by Lindle has shown that the only subgroup which has benefitted, albeit minimally so, from this common practice of grouping students

by ability has been the group exposed to the most comprehensive curriculum. This subgroup is comprised of the 20 to 40 percent of students in the "top" or advanced track. The vast majority, at least 60 to 80 percent, of students in the "general" and "low/basic" tracks are taught less, learn less, and drop-out more (26:1).

Although The National Middle School Association (NMSA) and many similar groups have gone on record in opposition to rigid grouping, George noted, middle school teachers and administrators appear to be divided in their beliefs about the efficacy of ability grouping. George went on to say that professional educators and researchers such as Fiedler, Lange, and Winebrenner believe that by the middle school years it is impossible for teachers to teach effectively in classrooms where the range of ability and achievement is so great, and they cite their own professional experience as proof. Others, like Oakes, argue that the act of ability grouping makes some classes, usually the lower tracks, virtually impossible to teach, and they too cite their own professional experience as proof. The debates in which all of these groups engage are often accompanied by considerable hostility and repugnance. Advocates for ability grouping are thoroughly convinced of the truth and justice of the point of view they advocate. They believe that the perspective of the "other side" is totally misleading and

without merit. Unfortunately, the real losers in these debates may be the students (8:17-18).

Statement of the Problem

What is the effect of ability grouping on the academic achievement of middle school students?

Hypothesis

Students make fewer gains in achievement while in ability grouped classrooms than while in classrooms grouped heterogeneously.

Purpose of the Study

The purpose of this study is to determine the effectiveness of ability grouping on the academic achievement of students, and to cite various reasons for these effects. The research will further explore alternatives to ability grouping as well as strategies for implementing the curriculum for all students.

Referring to research which indicates that ability grouping is only beneficial to some, George stated that no group and no individual student should be expected to sacrifice an excellent education so that others might do better. George continued to say that teachers must find ways for high ability learners to do their very best in the

context of an inclusive school characterized by diversity and heterogeneity. He also notes that educators must find ways for at risk students to achieve at least the minimum expectations of the school without placing the learning of others at risk (8:23-24).

George maintained that alternatives which will permit the emergence of inclusive classrooms and middle schools are now being pioneered by courageous practitioners in all parts of the country. Dozens of middle schools and several entire school districts have moved away from rigid ability grouping. In the coming decade, he concluded, educators must invent new ways for having their students learn together (8:24).

Significance/Importance

The significance of this research is to present to teachers alternative ways of teaching in classrooms with students of varying abilities so that all students can be successful. Braddock and Slavin expressed that students will not only gain in academic achievement because of these alternatives; however, their overall well-being, and that of society, will gain from both a social and an economic standpoint (25:14-15). Ability grouping inhibits development of interracial respect, understanding, and friendship. It undermines democratic values and contributes to a stratified society. As the American population becomes

ever more racially and culturally diverse, issues of intergroup tolerance and understanding take on greater significance for national well-being. Corporate leaders and educators have recently focused increased attention on the level and type of skills American youth bring to the workforce and on the content and quality of their high school courses and programs of study. In this vein, corporate leaders' concerns with the type of graduates produced by public schools is not limited to cognitive and technical skills, but also includes social skills and especially the ability to relate to persons of different backgrounds (25:15).

In their study of ability grouping Braddock and Slavin concluded that academic tracking is an anachronism. They asserted that there may have been a time when curriculum tracking in school actually coincided with the needs of the society and the economy. That is, a designated number of academically proficient students were needed to pursue further education and careers that depended upon that education, while a number of nonacademically oriented students were needed to enter the workforce directly and perform the important and occasionally well-paying jobs that required less education. Braddock and Slavin also said that the situation today has changed dramatically. If the United States is to maintain its standard of living, all students

need to be given the opportunity of being educated to their fullest potential (25:14-15).

According to Braddock and Slavin tracking and ability grouping must end. It is ineffective and harmful to students. The strong effect of tracking on adults' cognitive skill levels makes it obvious that if schools are to meet the requirements of the economy for a more highly skilled future workforce, public schools must provide more equitable access to learning opportunities which develop reasoning, inference, and critical thinking skills. Teachers need to learn about, witness, and experiment with new practical, alternative methods for teaching heterogeneous classes. Parents, teachers, and students need to be convinced that a change from homogeneous to heterogeneous grouping will meet the needs of all students (25:10-15).

Assumptions

1. The time frame was adequate.
2. The instrument utilized for the testing was valid.
3. The sample was adequate in size.
4. The sample was typical of elementary and middle school teachers.
5. The teachers surveyed have responded honestly to the questions.
6. The teachers understood the questions.

Limitations

1. The testing was limited to twenty-five students from one elementary school because this school was the only school which grouped by ability for math instruction.
2. The testing was limited to a t-test.
3. The survey was limited to five elementary schools and one middle school.
4. The survey is limited to 175 elementary and middle school teachers.
5. The survey is limited to Randolph County.

Definition of Terms

1) Middle school - in some school systems, a school between elementary and high school, usually having three or four grades, which vary between grades five and nine (1:899).
2) With-in class ability grouping - dividing a class into smaller groups and instructing each group separately (20:519).
3) Between-class ability grouping - assigning children to their classroom on the basis of previous academic achievement or perceived ability based on achievement test scores and teacher observations of classroom performance (12:430).
4) Inclusive education - the formal name given to an educational arrangement in which all students are

given the opportunity to participate in general education with their typical age peers to the greatest extent possible (3:13).

5) Tracking - separating students into full-time instructional groups based on a variety of criterion including presumed ability derived from achievement test scores and teacher observations of classroom performance (5:52).

6) Top track - also known as the fast track; high achievers placed in the top group for instructional purposes.

7) General track - also known as the middle group; students presumed having average academic ability or performance.

8) Low/basic track - students who are presumed to have low academic ability or performance.

9) Curriculum Adaptation - The practice of taking existing curriculum materials and altering them to meet the unique needs of one or more students, including: adaptations of textbooks, worksheets, and tests (29:2).

10) Instructional Adaptation - The practice of changing the manner in which instruction is delivered in order to meet the needs of individual students, including: grouping strategies, formats for evaluations, and methods of presenting lessons (29:2).

11) Public Law 94-142 - The Education for All Handicapped Children Act of 1975 (EHA)- This law mandates a free appropriate public education for all children with

disabilities, education in the least restrictive environment, Individualized Education Programs (IEP), and ensures due process rights (31:63).

12) Least Restrictive Environment - the educational placement which provides the services/conditions necessary to meet the unique learning and behavioral needs of the student, while providing the student with integration to the maximum extent possible with nonexceptional students (31:57).

13) Heterogeneous - composed of unrelated or unlike elements; varied (1:658).

14) Homogeneous - composed of similar or identical elements; of the same kind (1:672).

15) Specific Learning Disabilities - a heterogeneous group of disorders manifested by significant deficits in the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical abilities (31:16).

16) Joplin Plan - involves regrouping students for reading across grade levels but according to reading level, so that no within-class groups are necessary. This form of grouping is most often used in the upper elementary classroom (27:16).

Chapter 2

Review of the Related Literature

The practice of grouping students by presumed intellectual ability or prior academic achievement began in St. Louis, Missouri in 1867 (14:254). Seventy years of research as reported by Lindle has shown that ability grouping/tracking has failed to substantiate any clear benefits for any group of students, except those students in the highest tracks. This subgroup of students includes fewer than 50 percent of the students in middle schools today (26:1).

Grouping students by ability, according to Hereford, is one of the most common--and controversial--practices in education. Ability grouping is practiced at all levels--elementary, middle/junior high and high school, and it takes different forms. Yet, Hereford reported, whether it is within-class ability grouping or between class grouping, the rationale is much the same. The thinking behind this rationale is that if the range of abilities is reduced among a group of students, it will be easier for a teacher to aim instruction to meet those students needs; consequently, all students will achieve more (13:50).

Sorensen and Hallinan further noted that within-class ability grouping is a method designed to facilitate instruction, particularly in reading and mathematics. The

benefit, the author explained, came about in two ways. One mechanism was an increase in a teacher's ability to obtain and retain students' attention when there are fewer students in the instructional group. The other mechanism was an increase in a teacher's ability to adapt methods of instruction and instructional materials to the aptitudes and preparations of individual children when teaching only a smaller set of children in a subgroup of the whole class (20:519-520).

Another from of grouping that was found to benefit students at the elementary level was reported by Hereford. She noted that Slavin found that grouping plans involving cross-grade assignment for one or two subject areas can increase student achievement. One practice often studied was regrouping for reading using the Joplin Plan where students spend much of their day in a heterogeneous classroom, then are grouped for reading by performance level, not grade. When employing the Joplin Plan, a group of targeted students reading at the fifth grade level could include fourth, fifth, and sixth graders. Due to this narrow range of abilities, instructors are able to use whole-group instruction more effectively (13:51-52).

Hereford believed that researchers tended to be more critical of the practice of assigning students to classes based on their overall intelligence and performance. This

method of grouping requires students to spend all or most of the day with peers of the same ability. While this form of between class ability grouping is seen at the elementary level, she noted that it is more common in middle schools and junior highs where it is often referred to as "tracking" (13:50).

Tracking itself is a problem, as stated by Wheelock, because the criteria used to group students are based on subjective perceptions and fairly narrow views of intelligence. This author continued to say that tracking labels students both in the students' minds as well as in the minds of their teachers. These labels most often are associated with the pace of learning, such as the slow or the fast learners. Because of this thinking, Wheelock noted, educators confuse students' pace of learning with their capacity to learn. The author concluded that once students are placed in a track they tend to remain in that track for their school careers. The idea that student's achievement levels at any given time will foretell their achievement in the future becomes a self-fulfilling prophecy (22:18).

Academic Achievement

While there are no laws at this time safeguarding regular education students from segregation or tracking, Public Law 94-142 has been in place since 1975 to safeguard

the rights of special needs students. Meyers stated that Public Law 94-142 requires that handicapped students, including the learning disabled (LD), be educated in the most "normal" environment that would be appropriate and beneficial (15:27). He noted that even though these students may receive some support services from an LD teacher, most of them will spend the greater part of their day in the regular classroom confronting the general curriculum (15:28). This mandate has brought about a movement toward inclusion for all special needs students. According to George, middle schools are now developing curricula that are inclusive for both the special education and the non-special education students because of the many problems they have experienced with tracking (8:24).

One problem that has been discovered in middle schools where tracking is more common is the time constraints on teachers. Sorensen and Hallinan pointed out that ability grouping not only means dividing the class into subgroups, it also means dividing the total instructional time into times devoted to each of the subgroups. If all instructional periods are of equal length in homogeneous and heterogeneous classrooms, the division of time means that students in ability grouped classes receive less instruction. The repercussion, the authors concluded, is that in grouped classes low track students are taught less and they have fewer opportunities for learning (20:539).

These fewer opportunities for learning also come about because discouraged learners grouped together in low track classes may make teaching difficult. George stated that the majority of these students resent their status, respond defensively, and refuse to engage in the very academic efforts which might bring them more success. Teachers utilize creative teaching techniques with high achieving students because classroom management is not a problem. High risk strategies may be discarded for the low achieving students in favor of learning methods which keep students still and quiet (8:22-23).

Moreover, middle school students in advanced classes are exposed to a much more enriched curriculum than students in lower tracks. As George reported, the books are different. The assignments are different. The richness and robustness of classroom discussions are significantly different (8:22-23).

A study of ability grouping and instruction conducted by Gamoran and Nystrand in a sample of midwestern secondary schools offers data that conforms to the opinions of George. Gamoran reported that for their study nine high schools were selected from various communities including rural, urban, and suburban schools, and public and Catholic schools. The researchers chose sixteen junior high or middle schools that served as feeder schools for the high schools to allow them to follow students from the eighth to ninth grade. Of the

112 English classes studied over the two year time frame, forty-two in eighth grade and fifty in ninth grade were grouped by ability. The ability grouped classes were defined as honors, regular, and remedial.

Gamoran reported that readings in high track classes consisted of "standard works of literature", while readings in low-track classes consisted of what would be considered "young-adult fiction". High track classes wrote essays whereas low track classes often completed fill-in-the-blank worksheets. High track classes spent more time on recitation and discussion and less time on seat work while low-track and regular classes did not differ in the amount of time devoted to these activities. Gamoran concluded that on the whole this study found less serious, less demanding, and less stimulating instruction in the low-track classes (7:6-7).

Not only are low track students taught less but as Wuthrick described, they also are taught in qualitatively different ways. Wuthrick cited that when students are divided into ability groups for reading, many patterns seem to exist. For instance, seeking a more pleasurable experience, teachers often choose to meet with the good readers, known as the fast track reading group, first and for longer periods of time. The fast track students read silently seventy percent of the time, allowing them to cover more material in a given period, while the slow track, the

poor readers, only read silently thirty percent of the time. The author continued to say that while reading orally with the fast track students, educators offer corrections at the end of the reading which is less disruptive to the reader's fluency. However, while working with the slow track students, educators tend to interrupt the reading to make corrections and often identify more difficult words immediately assuming the readers cannot identify the words themselves. Wuthrick resolved that because of these interruptions, poor readers seldom have the opportunity to develop the traits associated with good reading, particularly fluent and rapid oral reading (23:554-555).

Teacher attitudes towards ability grouped classes can also be noted in the gestures they exhibit during instruction. According to Wuthrick, while working with students in the fast track teachers smile, lean toward the students, speak in a friendly manner, and look into their eyes. On the other hand, the author continued, while working with the slow track readers, teachers frown, purse their lips, glare at the students, and lean away from the interaction (23:554-555).

These actions exhibited by the teachers only add to the stigma of low ability students already divided from their peers. deVinck recalled being placed in the low reading group during his education. The author stated, "do you know what it does to a child when he hears he is stupid"?

deVinck continued to say that the word stupid is never stated by teachers or administrators, nor is it found on school records but children have an amazing sense of understanding guilt by association: remedial reading, tracking, basic English, general math. The author concluded that there is a clear aristocracy in the classrooms preserved by the grouping of children (4:40-41).

Another classroom incident involving ability grouping had the opposite effect on low achieving students because of the teacher's positive outlook for her low achievers. Smith recalled having her classroom divided into two groups for reading. She recollected that even though the lower group was doing their work to her satisfaction she still felt something was not right. While making plans for the fourth week of school the author realized she had the two groups mixed up and that the lower reading group had been reading out of the higher reading group's book. Smith said with her principal's permission she kept the slower readers in the higher reading book for the remainder of the year and that it was the best thing she could have done for those students. When Smith explained to the students what had happened they were so proud of themselves. They were reading out of the "smart" kids books and with understanding, she recalled them saying (19:425-426).

Although high achievers have their self-concepts inflated by being placed in the top groups, educators need to be aware of the impact grouping has on the low achievers. Lindle reported that self-esteem in students is irreparably damaged by the practice of ability grouping. She went on to say that schools which practice ability grouping are unintentionally authorizing a social/academic heirarchy among students. Lindle concluded that good schools are noted for their concerted climates and sense of community and tracking contradicts this feeling of belonging (26:6).

While these low track students lose their sense of belonging, they also may begin to feel inferior and worthless. A National Longitudinal Study of 1988 (NELS:88) was conducted by Braddock and Slavin. These researchers looked at more than twenty thousand eighth grade students who attended more than one hundred schools in which ability grouping was or was not used and then examined the outcomes for these students in the tenth grade. Braddock and Slavin compared high, average, and low achievers separately in the tracked schools to the students in the untracked schools. The results were astounding. Students in the low track performed noteably lower on composite and core subject achievement tests (reading, math, science, and social studies) than did similar low achievers in untracked schools. Yet, there was no consistent similar benefit of ability grouping for high or average achievers. Low-track

eighth graders were much more likely to end up in non-college preparatory programs in tenth grade than were untracked low achievers. Also, students in the low track had significantly lower self-esteem than low achievers in mixed ability classes.

The frustration of being in the low track has many effects beyond low self-esteem and the feeling of inferiorty. According to Braddock and Slavin students in the low track are more likely to be delinquent than other students and are less likely to complete their education (25:9). Educators have begun using the term "at risk" to describe students who are unlikely to graduate from high school. Slavin reported that several risk factors including low achievement, retention in grade, behavior problems, poor attendance and low socioeconomic status are closely associated with dropping out of school. Research has found that by the time students are in the third grade, educators can adequately predict which students will eventually drop out and which will complete their schooling (2:5).

Current Developments and Issues

Many researchers have offered alternative methods of teaching and grouping as ways out of rigid ability grouping and the problems associated with this practice. Hereford reported that, based on research, Slavin recommended alternative methods of grouping for elementary educators. Slavin suggested that teachers should only group students

when necessary and for only one or two subject areas, allowing students to remain in heterogeneous classrooms for most of the day. Instead of using previous performance or IQ tests, students should be assigned to groups based on their demonstrated needs and abilities. Grouping assignments should be reassigned frequently so that students can move from group to group as their progress or needs warrant. For instance, when students are grouped by math, those that do consistently well should be able to move to a faster-paced group, while one who may be struggling with a certain skill, such as long division, should be able to move to a group covering that concept at a slower pace (13:52).

One alternative to ability grouping often recommended is the use of cooperative learning. Cooperative learning involves students working in small, heterogeneous learning groups. Slavin stated that research on cooperative learning invariably finds positive effects when it involves two major elements : group goals and individual accountability. Group goals and individual accountability involve rewarding or recognizing groups based on the sum or average of individual learning performances (27:15-16).

Two cooperative learning programs developed by Slavin designed to specifically enhance instruction and success in reading and math are known as Team Accelerated Instruction (TAI) and Cooperative Integrated Reading and Composition (CIRC). In TAI students are assigned to four-to-five member

mixed ability study teams for math instruction. Students are also assigned to skill level groups on the basis of a placement test. According to Slavin, instruction is given to the skill level groups on the mathematical concepts. Students then return to their teams to work on individual-instructional materials. Students study together for quizzes, help one another with difficult problems, and check one another's work against answer sheets. Quizzes are taken without any team assistance, and scoring at the mastery level or above adds points to student's team scores. At the conclusion of each week team scores are totaled and teams that meet or exceed a predetermined criterion in terms of numbers of units mastered may earn rewards (2:39-42).

The CIRC program consists of a combination of mixed-ability, cooperative work groups and skillbased reading groups to teach reading, language arts, and writing in the upper elementary/middle school grades. While the teacher is working with one reading group, students in other groups are working in their pairs on a set of cognitively engaging activities, including reading to one another, making predictions about how stories will come out, summarizing stories to each other, writing responses to stories, and practicing vocabulary and spelling. Students work in their teams to master main idea and other comprehension skills.

All activities in CIRC follow a regular cycle that involves teacher presentation, team practice, independent

practice, peer pre-assessment, additional practice, and testing. Team members receive points based on their individual performances on all quizzes and writing activities. These points are added to form a team score. Teams that meet an average predetermined criterion on all activities in a given week are given certificates or rewards as with the TAI program (2:39-42).

Slavin concluded that cooperative learning is a valuable tool for nourishing peer relationships, self-esteem, acceptance of academically handicapped students, and the ability to work together (27:15-16). Moreover, The Carnegie Council on Adolescent Development concluded that cooperative learning helps high achievers to deepen their understanding of the material by explaining it to the lower achievers, who in turn benefit by receiving extra help as needed from their peers. The council further stated that students working in cooperative learning settings master course material faster, retain the knowledge longer, and develop critical reasoning powers more rapidly than they would working independently (28:27).

The key to untracking and getting students to work and learn together is to make the "top track" curriculum available to all students without watering it down. This may require, Slavin informed, doing more active teaching and less worksheets. Educators should incorporate more projects and hands-on curriculum and less inert instruction.

Providing low achievers with support services such as peer tutoring can also be a very useful tool (27:10-16).

Wuthrick reported that to keep teachers from feeling as though they must water down the curriculum for low achievers extended learning times for those students would be very effective in helping them keep up with a demanding curriculum. Support services for preteaching or remedial work should be embedded in to the regular school day for low achieving students. A second reading session for low achievers could emphasize practice in silent reading. The author stated that as these students gain a sense of reading autonomy they will no longer feel threatened by unfamiliar words. When decoding is no longer the primary focus of their reading, they can begin to read more fluently and for meaning, the author concluded (23:555).

Mastery learning is another effective alternative to aid in the success of inclusive education and move away from homogeneous ability grouping, reported Manning and Lucking. Mastery learning assumes all children can learn given time and appropriate instruction. Mastery learning involves whole class instruction succeeded by some formal assessment. Students who achieve at a preestablished level of mastery begin enrichment activities while those not reaching the mastery level receive remedial instruction designed to bring them up to the mastery criterion. According to Manning and Lucking, mastery learning reduces the stigma placed on being

grouped together with all low ability students because the grouping for remedial and enrichment activities constantly changes (14:257-258).

Curriculum and instructional adaptations can also be made to ensure the success of all students, according to Farrell. He asserted that these adaptations do not create a need for different lesson plans since the goal of adaptations is to make typical lessons more accessible to all. These adaptations could include presenting information through a multisensory approach, that is providing instruction through oral presentations, the use of the chalkboard and the overhead projector, as well as any kinesthetic activity that can be incorporated in to the lesson. Farrell also found that adapting the length of the assignment reduces stress and allows more time for students to complete the assignment. Providing study guides that identify key vocabulary and concepts for quizzes and tests and allowing the students to choose the form of assessment on an individual basis can also be effective strategies for student success, Farrell concluded (29:12).

According to Braddock and Slavin, none of these instructional alternatives for teaching heterogeneous classes can be made overnight. All require staff development and training over an extended period of time. Staff development programs should incorporate extensive use of peer coaching as well as follow-up programs from the

initial expert coaches and trainers. The authors further noted that it is also important to involve the teachers in making decisions about how these staff development programs will take place and about how the school in general will change to increase its effectiveness for all students (25:13).

The National Association of State Boards of Education (NASBE) expressed that teachers not involved in planning for heterogeneous classes and inclusive education are more likely to feel put upon, forced, or compelled into creating an inclusive school rather than being an active participant in the process. The best way to avoid this feeling, recounted the NASBE, is to guarantee that all building teachers are kept abreast of inclusion developments and are given the freedom to ask questions they might have regarding inclusion and students with learning disabilities. Teachers are the best means of communication with their peers on the benefits of inclusion and classroom strategies (21:29).

Bradley and Fisher reported that because middle school students strengths and weaknesses are varied and change over time, it is at this level that the inclusion process can be most successful. The authors continued to say that middle school teachers and administrators know that their students are unique and their programs must reflect the diverse needs and characteristics of this age group. When the needs of students with learning disabilities are observed as

another form of this diversity, the prospect of successful inclusion in the middle school is hopeful (3:13).

The inclusion process at the middle level promotes the development of interdependent classrooms within the interdisciplinary teams. General education teachers are cited for expertise in curriculum, instruction, and classroom management skills while special education teachers emphasize modifications, learning styles, and organization of support programs. Bradley and Fisher related that as educators move toward the formation of a more integrated educational community, they take a step toward the complete education of students who have been segregated too long (3:13-16).

Summary

According to George, the issue of the effectiveness of tracking and ability grouping may be the single most controversial and unresolved issue in American education today. During the last half century there have been more than seven hundred studies on tracking and ability grouping, more than any other educational topic. George related that while most of the research, eighty-five percent, says that ability grouping is ineffective, some estimates indicate that as many as eighty-five percent of today's schools still group students for instruction in this manner (9:2).

Tracking and ability grouping continue today, as related by George, because teachers believe it is easier to plan and deliver instruction to homogeneous classes and because parents of the small group of high achievers that seem to benefit somewhat want their students segregated from the students who are less capable (9:13). Moreover, Sorenson and Hallinan reported that teachers tend to believe students benefit when there are fewer of them in the instructional group because they are able to hold their attention for longer periods of time. These authors also noted that the practice of ability grouping remains popular because educators tend not to believe the research findings which show little or no effects on student achievement, perhaps because the research is not convincing (20:519-520).

Instructional time constraints were noted by Sorenson and Hallinan as one of the problems associated with tracking. These researchers found that dividing students into ability groups gave teachers less time to work with each individual group and therefore the students had fewer opportunities for learning (20:539). Other problems associated with ability grouping were attitudes displayed by teachers which led to poor self esteem in students. deVinck recalled that students know what the terms remedial education and general math refer to and that a student's self esteem is irreparably damaged by this labeling (4:40-41).

Alternative styles of teaching and instructional adaptations have been offered by researchers who have found problems with ability grouping to be detrimental to the education of these students. Slavin's work on cooperative learning suggests methods of instruction teachers can utilize through peer coaching and team effort all the while requiring students to be individually accountable for their work (27:15-16). Manning and Lucking introduced mastery learning as a means of reducing the stigma placed on students who are consistently grouped with all low ability students because with mastery learning the remedial and enrichment groups are constantly changing (14:257-258). While Wuthrick reported that a second reading session helped students to gain a sense of reading autonomy and helped to reduce the stress of being faced with unfamiliar words (19:555), Farrell found that reducing the length of the assignment can also reduce stress by allowing students more time to complete their assignments (29:12).

The process of changing from homogeneous grouping to heterogeneous grouping requires top quality staff development and training as well as teacher imput as to how the change will take place. Braddock and Slavin reported that educators should not be expected to make this change overnight but should be given training over an extended period of time with follow up sessions by the expert

trainers (25:13). The NASBE also stated that in order for teachers to feel as if they are a part of this change that they should be kept abreast of inclusion developments and feel free to ask any questions they may have about students with disabilities (21:29). Finally, Bradley and Fisher stated that because of the diversity that already exists at the middle level it is at this level that inclusion can be most successful (3:13).

Chapter 3

Methods and Procedures

Data was collected from cumulative folders for twenty-five seventh grade students who have received instruction in ability groups and in inclusive settings. These twenty-five students were randomly selected from a list of eighty students with the only criteria being that they were in an ability grouped setting for math instruction during their third grade year and in an inclusive setting for Math instruction for their sixth grade year. Standard test scores from the California Test of Basic Skills (CTBS) were compiled. A comparison of scores was made with the use of a t-test. The CTBS test was chosen because it has been used previously with testing students typical of those participating in this study and because it has been administered for years to evaluate the academic achievement of students in Randolph County.

The t-test was used to determine if there was a difference in the standard scores of students after instruction in ability grouping compared to scores of the same students after instruction in an inclusive setting. This information has been presented in Appendix A, page 58-61.

A written survey was also conducted with teachers in grades kindergarten through eighth in five elementary

schools and one middle school in Randolph County. These schools are in both urban and rural sections of the county.

This survey has been distributed by volunteers to each teacher at the participating schools and returned via county mail. A copy of the survey is included in Appendix B, page 62-63. The information will be presented by means of bar and pie graphs.

Two of the questions in the survey asked if ability grouping had been employed in the past five to ten years and for what subject areas. One question asked if any subjects were being taught at the present time using ability groups. Two questions pertained to reasons teachers generally group students and what criteria they use to group students. There were two statements made about students in the high ability group that requested teachers to respond by agreeing or disagreeing. One question asked what group of students do teachers prefer to instruct. Four questions pertained to the types of delivery of instruction. Four questions related to the Title 1 programs at the participating schools. These sixteen questions were presented with multiple choice answers. This reduced the amount of time for teachers completing the survey and allowed for the return of more completed surveys.

The survey was used to gain information on how and for what purposes ability grouping is utilized and to compare

curriculum and instructional techniques of the teachers in classrooms where ability grouping is practiced and in classrooms where students are grouped heterogeneously. The survey was also used to see if the participants' attitudes and practices in teaching were typical of those found in the study.

A letter was sent to the Superintendent of Randolph County Schools to gain permission to conduct the survey. An additional letter was also sent to gain permission to collect standard test scores from the CTBS. This data is secured in cumulative files located in the guidance counselor's office at Elkins Middle School. A copy of the letters may be found in Appendix C, page 64 and Appendix D, page 65. The acceptance letter from the Superintendent of Randolph County Schools may be found in Appendix E, page 66.

Chapter 4

Results

The t-test

The data were analyzed by the use of the t-test. Standard scores on the California Test of Basic Skills were analyzed by comparing students' scores on the Math section when they were in an ability grouped setting at the third grade level to their scores on the Math section when they were in an inclusive setting at the sixth grade. The t-test was used to see if a difference existed in the scores. There was no significant difference in the scores of the two samples. Students when at the third grade level received a mean standard score of 57.6 while their mean standard score at the sixth grade level was 54.9. This resulted in a difference in the mean scores of 2.7, which resulted in the acceptance of the null hypothesis.

Statistical Information

$\mu_A - \mu_B = 0$ = null hypothesis

$\mu_A - \mu_B \neq 0$ = alternate hypothesis

Level of significance 0.05

N = 25 N = 25

$\bar{A}$ = 57.6% $\bar{B}$ = 54.9%

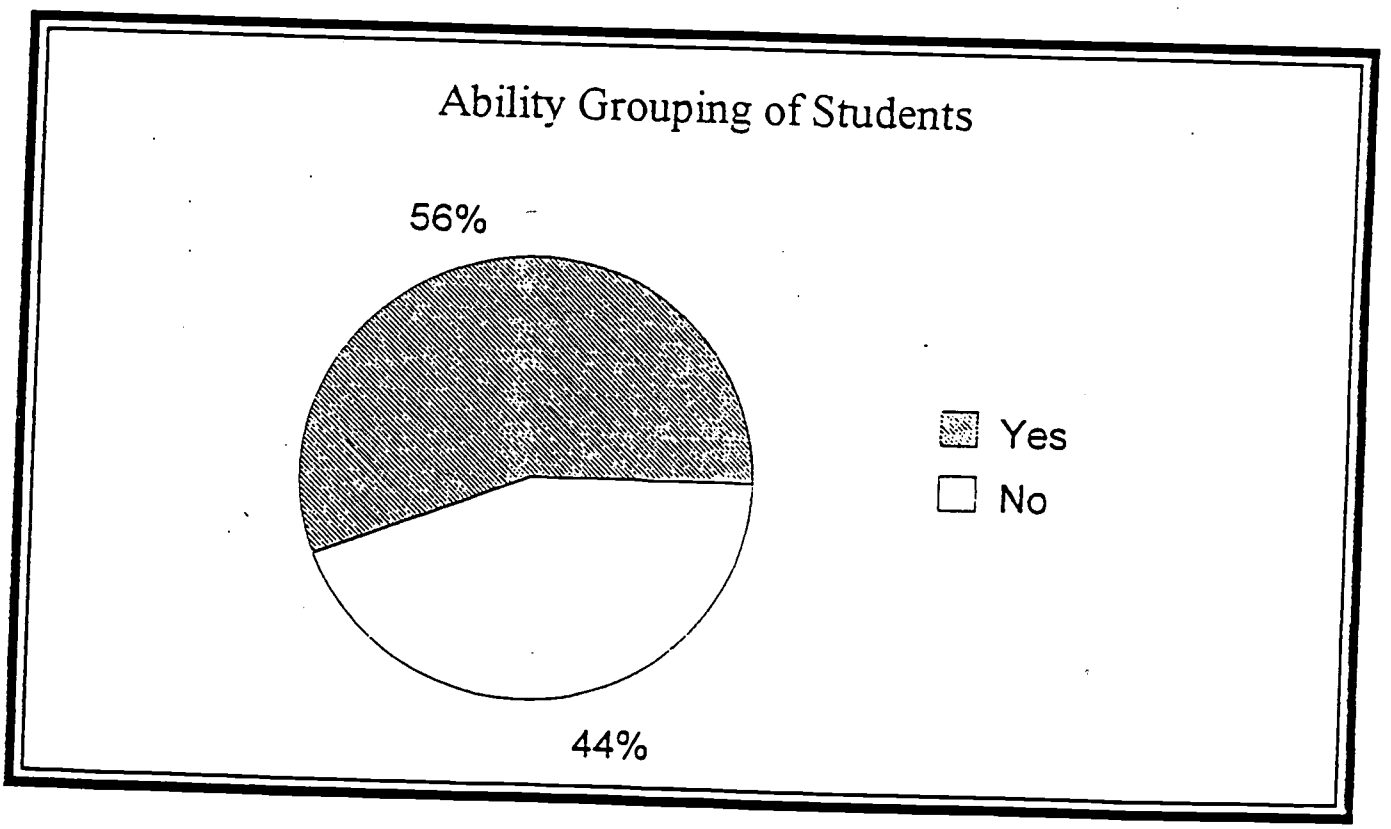
Est. sigma of A - B = 6.490

t = 0.4160; critical t = 2.021

The Survey

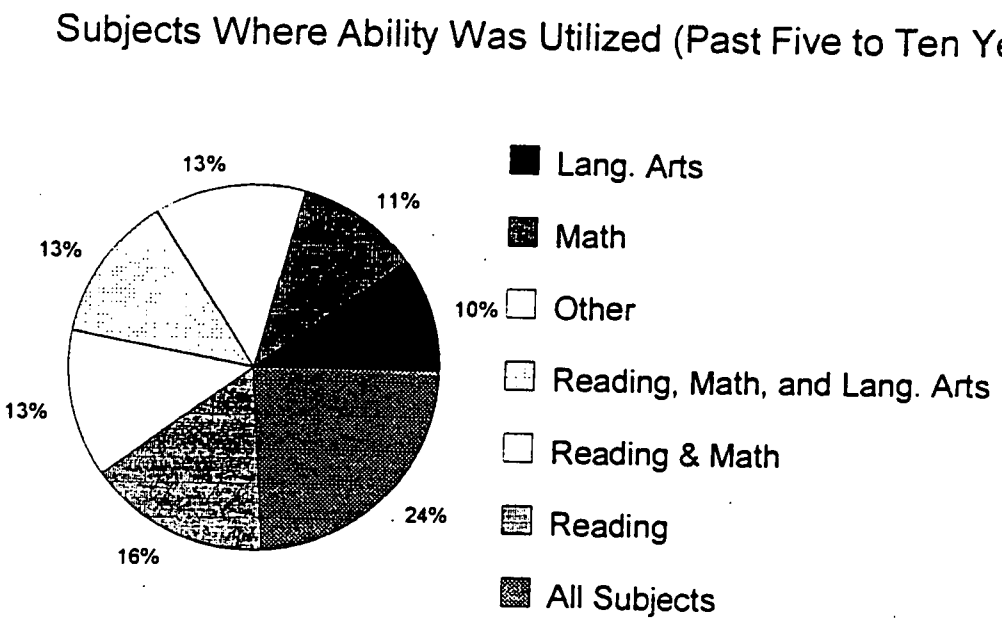
Of the elementary and middle school teachers surveyed, 56 percent indicated they had grouped some of their classes by ability level for classroom instruction in the last five to ten years. Of those polled, 44 percent reported they had not grouped any classes by ability for classroom instruction in the last five to ten years.

Figure 4.1



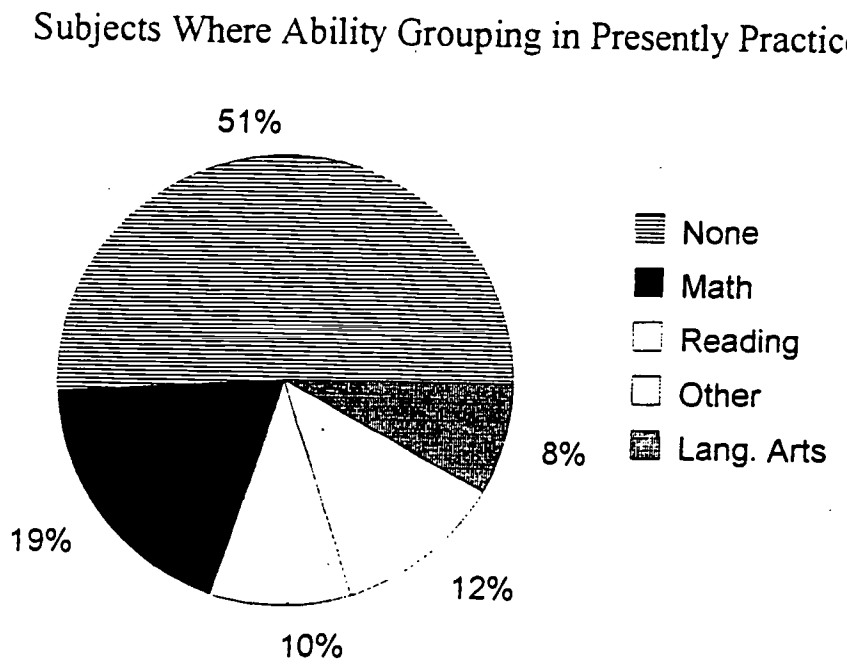
Of those teachers indicating they had grouped students by ability level for classroom instruction in the past five to ten years, 16 percent said they had grouped students by ability for only Reading, 11 percent for only Math, and 10 percent for only Language Arts. Of those instructors completing the survey, 13 percent reported they had grouped students by ability for Reading and Math, while the same percentage (13.0) was also indicated for Reading, Math, Language Arts, and for "other". The majority of teachers responding, 24 percent, indicated they had grouped students by ability for all subject areas.

Figure 4.2



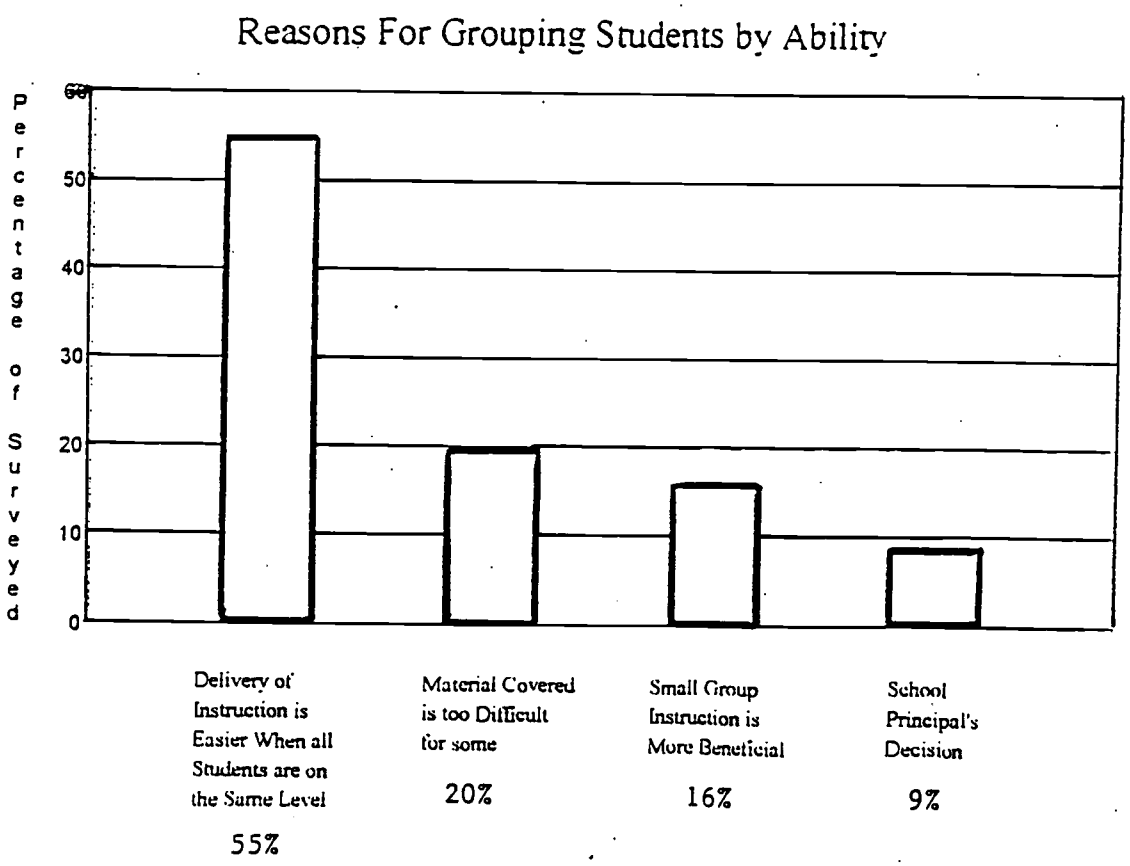
Of the elementary and middle school educators completing the survey, 51 percent reported that at the present time they were not grouping any of their students by ability for classroom instruction. Math was indicated by 19 percent of the teachers surveyed as a subject where grouping students by ability is presently practiced. "Other", a category referring to subjects such as Science, Social Studies, and Health, was an area where 12 percent of those polled stated they were grouping students by ability, while Reading was noted by 10 percent, and Language Arts by 8 percent.

Figure 4.3



Question number four of the survey asked teachers what reason they generally use when grouping students by ability. Of those responding, 55 percent noted that the delivery of instruction is easier when all students are on the same level. Those who stated that the material covered is too difficult for some students composed of 20 percent. Of the teachers completing the survey, 16 percent felt that small group instruction was more beneficial, while only 9 percent reported that it was a decision made by the school's principal.

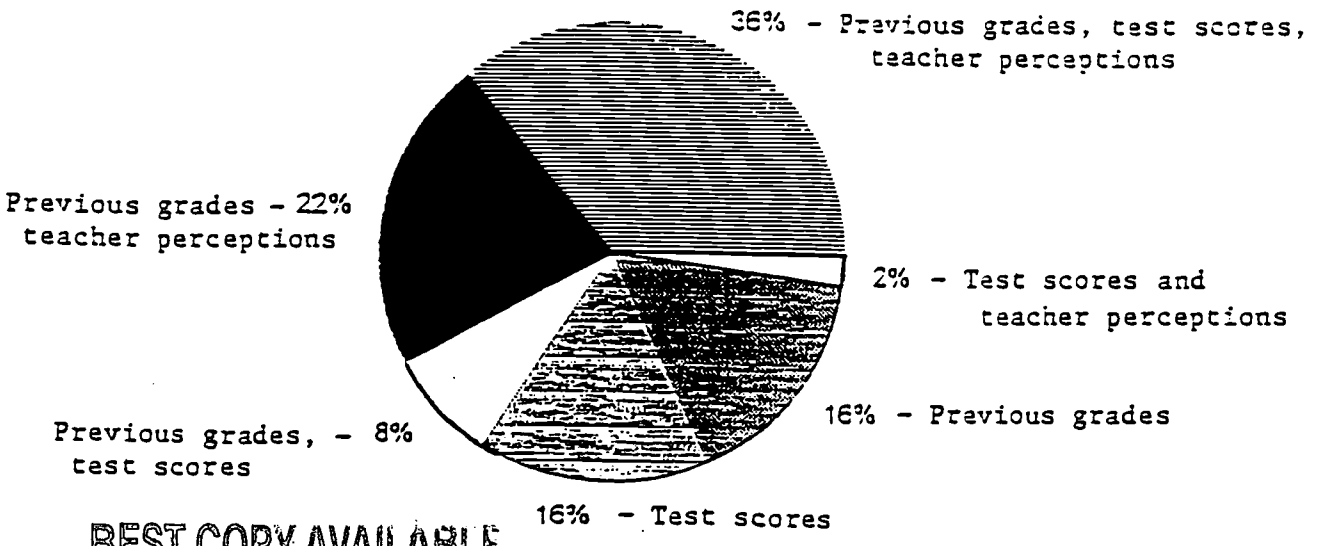
Figure 4.4



Question number five asked educators, "What criteria are used when grouping students by ability?" Of those teachers responding, 16 percent indicated they use only previous grades/academic achievement, while another 16 percent stated they use only test scores (CTBS or Special Education testing). Of those polled, 8 percent use both previous grades/academic achievement and test scores. Previous grades/academic achievement, and teacher perceptions was cited by 22 percent of those responding, while only 2 percent cited test scores and teacher perceptions for their criteria. The majority of teachers responding, 36 percent, noted that they use all three of the criteria mentioned.

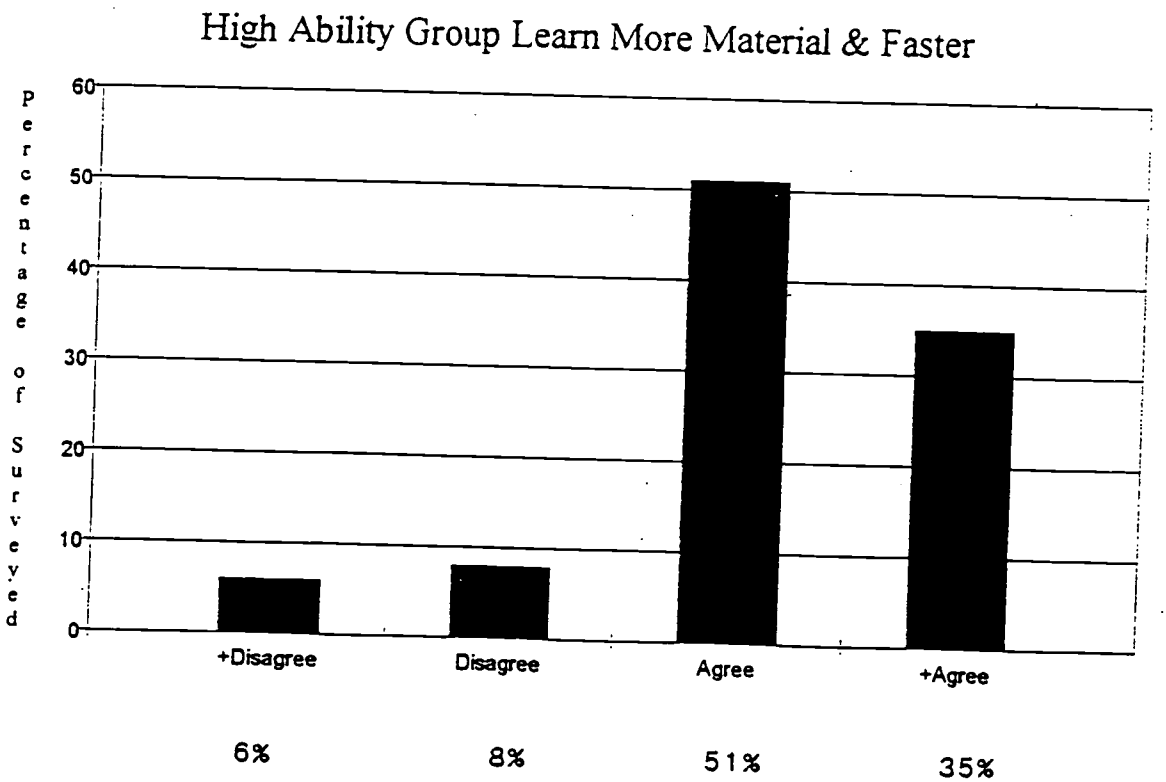
Figure 4.5

Criteria Used When Grouping Students by Ability



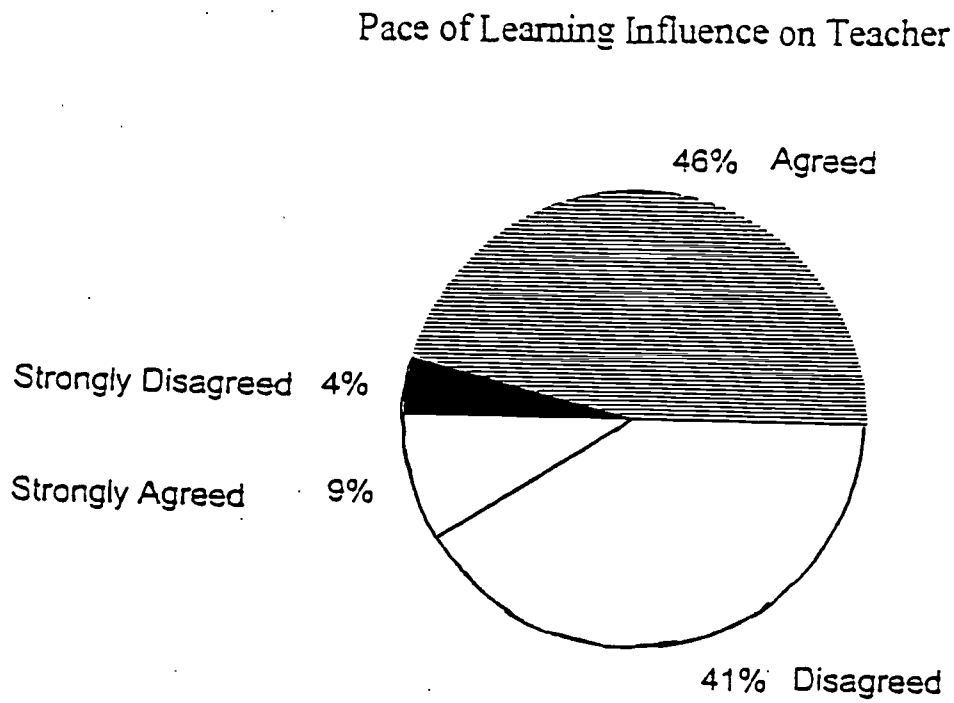
Of the instructors polled, 35 percent strongly agreed that the students in the high ability group learn the material faster and therefore are able to cover more material over a year's time. Those who agreed with this thinking composed of 51 percent. Of those teachers completing the survey, 8 percent disagreed with the idea that students in the high ability group learn the material faster and therefore are able to cover more material over a year's time, while 6 percent strongly disagreed with this thinking.

Figure 4.6



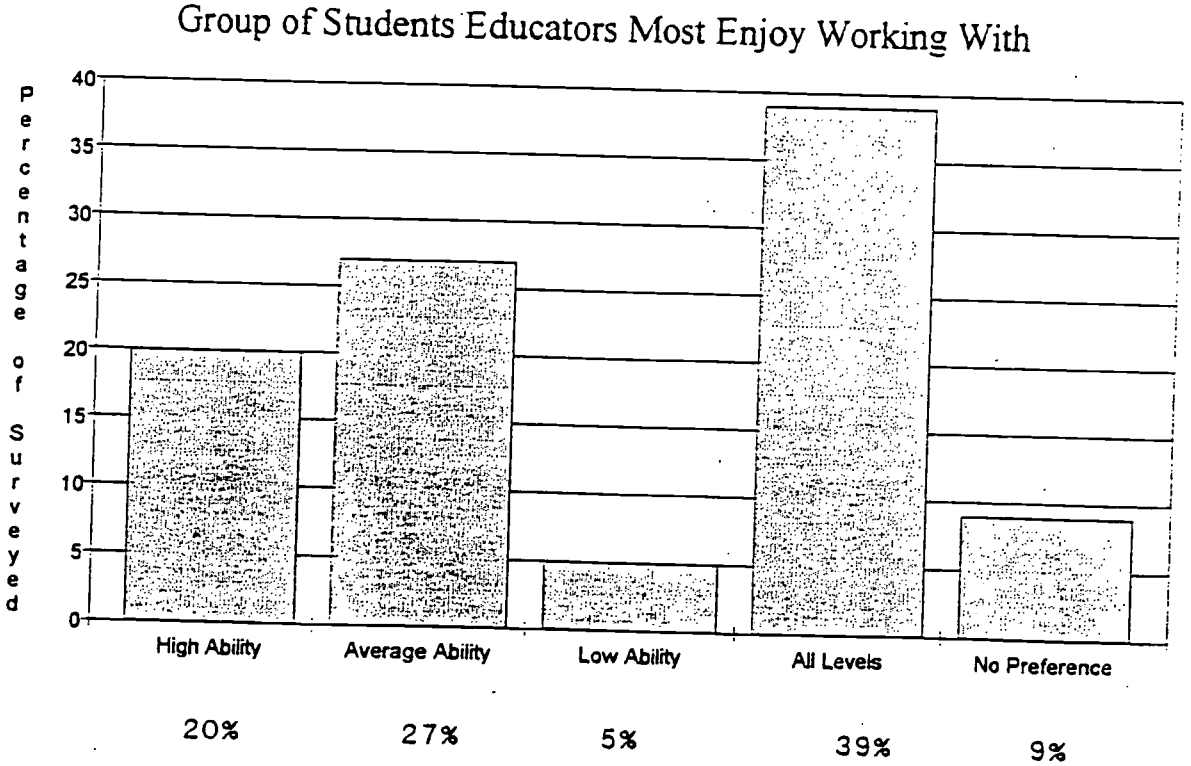
Question number seven stated, "Students who learn the material quickly make the teacher's job easier and more enjoyable". Of those teachers responding to the survey, only 4 percent strongly disagreed with this statement, while 41 percent disagreed. The majority of teachers responding, 46 percent, agreed that students who learn the material quickly make the teacher's job easier and more enjoyable, while only 9 percent strongly agreed with this statement.

Figure 4.7



Of the elementary and middle school teachers surveyed, 20 percent reported that they most enjoy working with students in the high ability group. Of those polled, 27 percent expressed that they most enjoy working with students in the average ability group, while only 5 percent enjoy working with students in the low ability group. The greater share of the teachers, 39 percent, revealed that they enjoy working with all levels grouped together the most. Of the educators polled, 9 percent cited no preference when working with students.

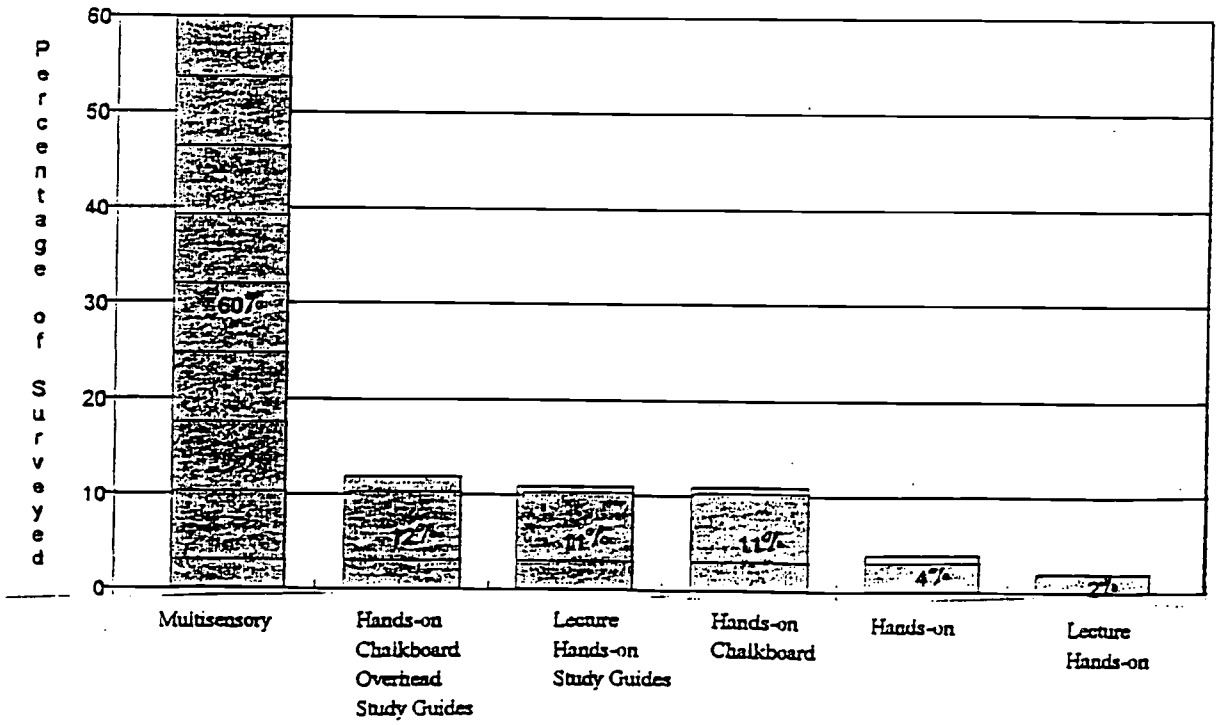
Figure 4.8



Of the elementary and middle school instructors completing the survey, the majority, 60 percent, indicated they utilize a multisensory approach (a combination of hands-on, chalkboard/overhead, lecture, and study sheets/hand outs) to deliver instruction. Of those responding, 12 percent reported using a combination of hands-on, chalkboard/overhead, and study sheets/hand outs, while 11 percent stated they used a combination of lecture, hands-on, and chalkboard/overhead to deliver instruction. Another 11 percent of those polled reported using a combination of hands-on and chalkboard/overhead to deliver instruction, while only two percent indicated the use of lecture and hands-on. Only four percent noted using only one method, hands-on, to deliver classroom instruction.

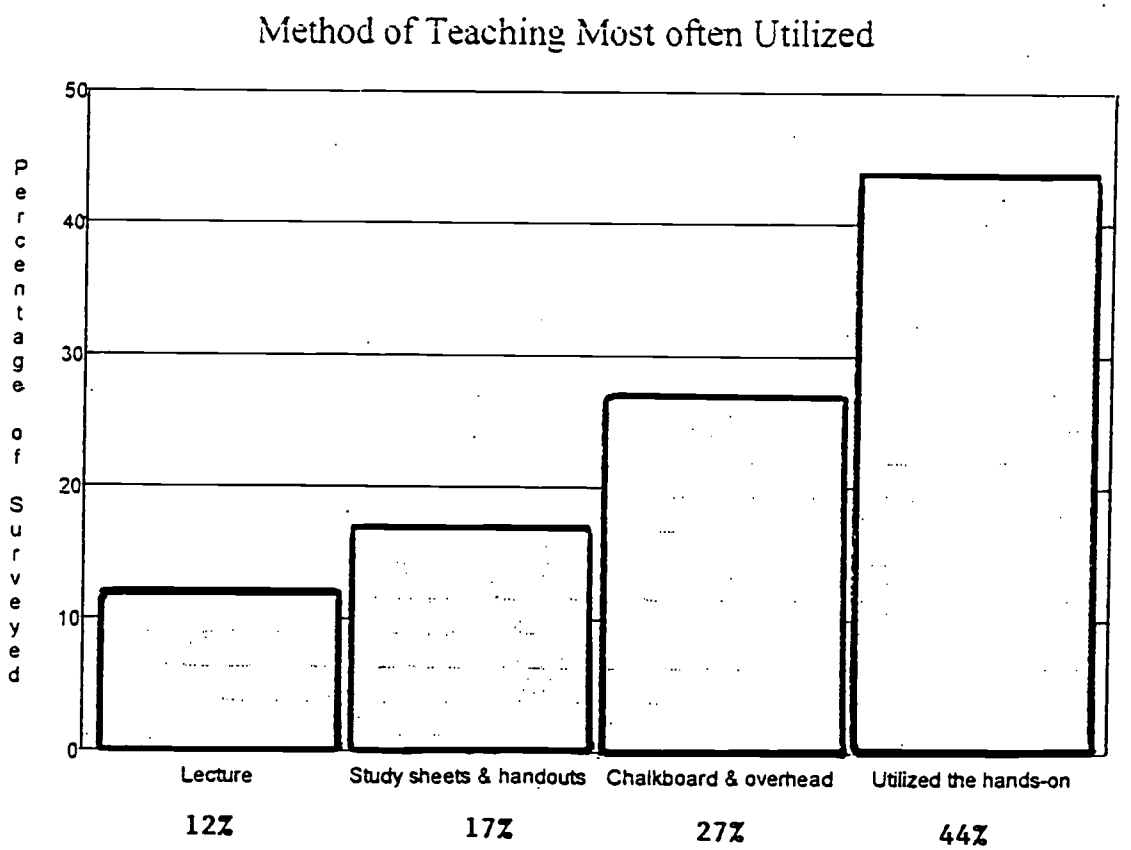
Figure 4.9

Methods of Teaching Used to Deliver Instruction



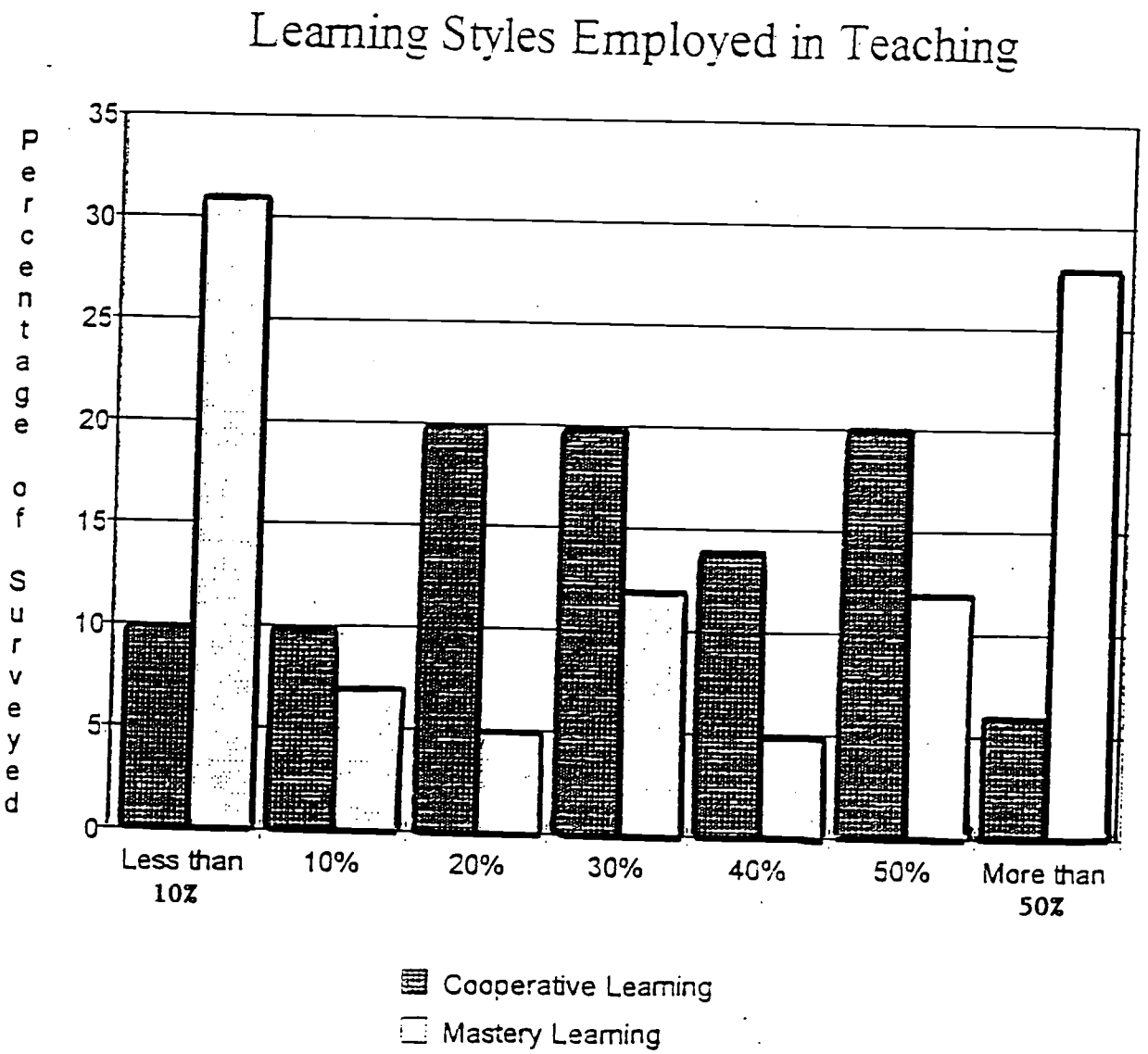
Question number ten asked, "If you use a multisensory approach to deliver instruction, which do you most often use?" Of those polled, 12 percent reported they utilized lecture, 17 percent noted they used study sheets/hand outs, and 27 percent reported using the chalkboard/overhead. The majority of teachers responding, 44 percent, indicated they employed the hands-on method of instruction the most to deliver instruction.

Figure 4.10



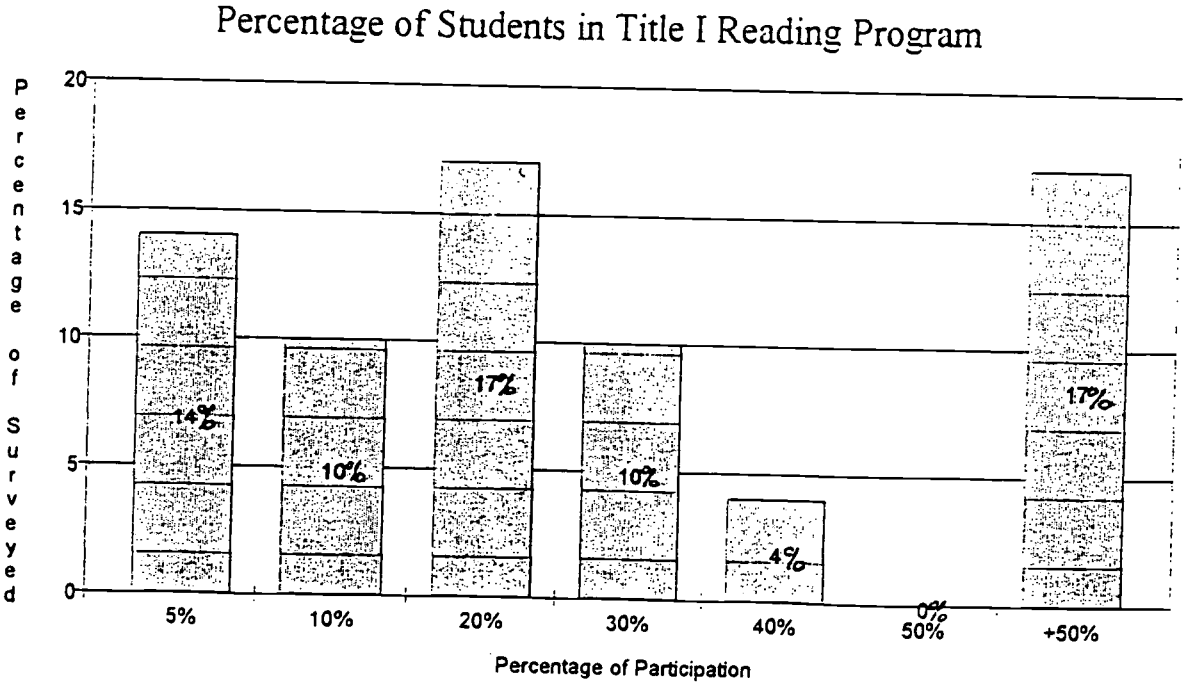
It was also asked, "What percentage of time do you incorporate cooperative learning in your classroom?" Of those completing the survey, 10 percent indicated less than 10 percent, another 10 percent reported using this style of learning 10 percent of the time. Those teachers who incorporate cooperative learning 20 percent of the time composed of 20 percent, 30 percent was noted by 30 percent, 40 percent was noted by 14 percent, and 50 percent was reported by 20 percent. The smallest number of teachers surveyed, six percent, indicated cooperative learning being incorporated into their teaching more than 50 percent of the time. On the same graph, the answer to the question, "What percentage of time do you incorporate Mastery Learning?" is also displayed. Those teachers who employ Mastery Learning less than 10 percent composed of 31 percent, seven percent noted 10 percent, 20 percent was noted by only five percent, and 30 percent was reported by 12 percent. Mastery Learning is incorporated 40 percent of the time by only five percent of those educators completing the survey, while 12 percent noted using this style of learning 50 percent of the time, and 28 percent expressed utilizing Mastery Learning more than 50 percent.

Figure 4.11


Learning Styles Employed in Teaching
Percentage of Surveyed
35
30
25
20
15
10
5
0
Less than 10%
10%
20%
30%
40%
50%
More than 50%
Cooperative Learning
Mastery Learning

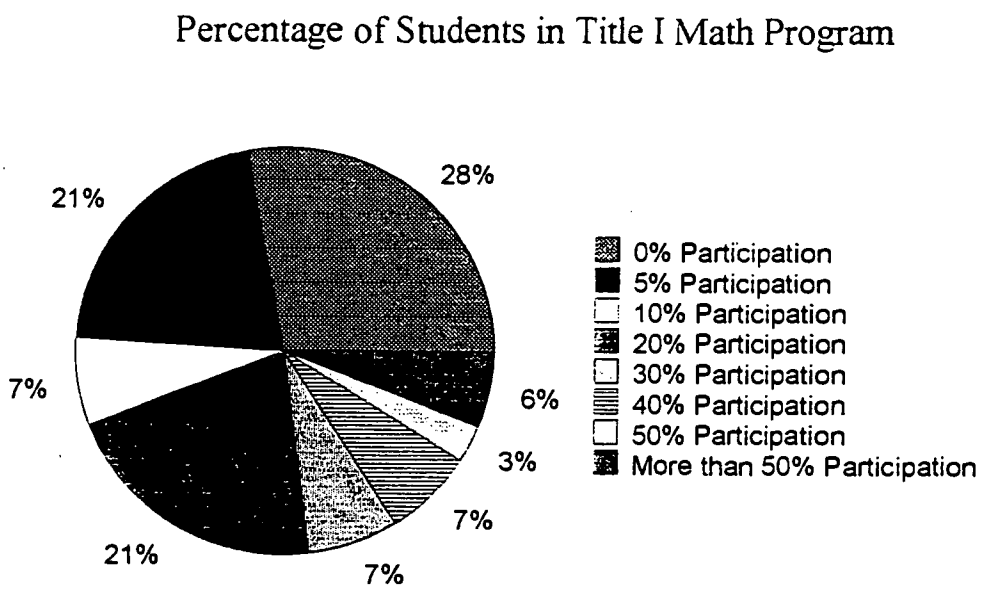
Of the teachers responding to the survey, 31 percent, the majority, stated that none of their students participate in the Title 1 Reading Program. Of those participating in the survey, 14 percent stated that five percent of their students participate, 10 percent reported 10 percent, while 17 percent reported 20 percent. Another 10 percent stated that 30 percent of their students partake in the program, while only four percent indicated that 40 percent of their students take part. None of the teachers reported that 50 percent of their students are active in the Title 1 Reading program, whereas 14 percent reported that more than 50 percent of their students participate in the program.

Figure 4.12



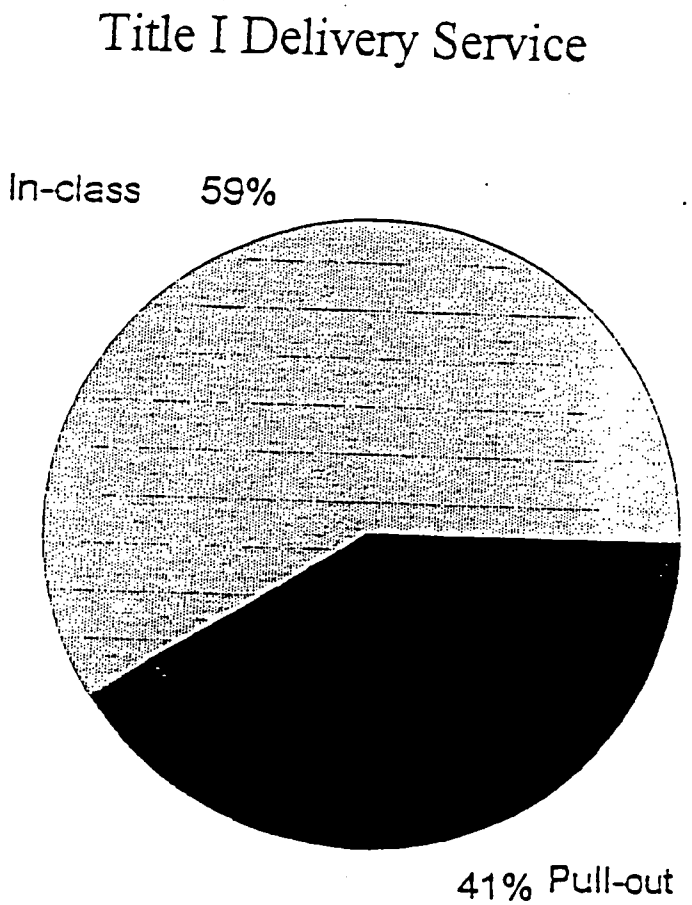
It was also asked, "What percentage of your students participate in Title 1 Math?" Of those completing the survey, the majority, 28 percent noted that none of their students participate, while 21 percent was noted for both five percent and 20 percent participation. Only three percent of those responding reported their students participate 50 percent of the time and only six percent indicated that more than 50 percent of their students partake in the Title 1 Math program. Seven percent also reported participation rates of 10 percent, 30 percent, and 40 percent.

Figure 4.13



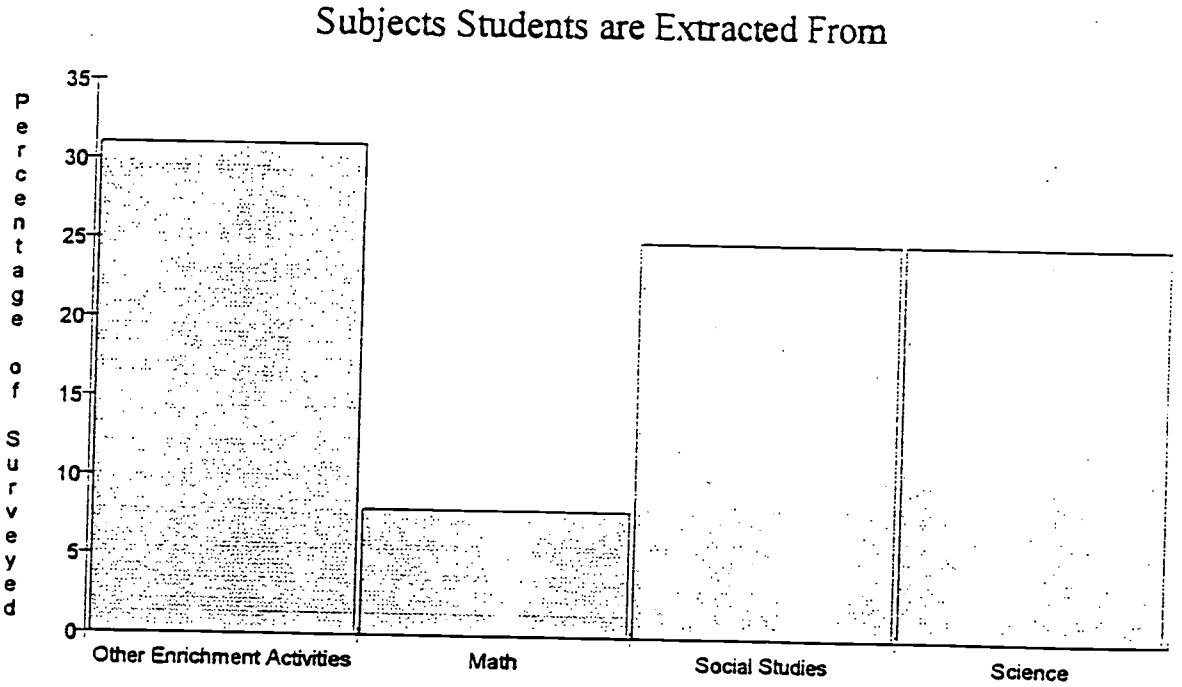
It was then asked, "How are your school's Title 1 Programs delivered?" Of those participating in the survey, 41 percent stated their program was delivered as a pull out program. The majority, 59 percent, reported their Title 1 program was delivered on an inclusive basis in the regular classroom.

Figure 4.14



The final question of the survey asked, "If your Title 1 program is a pull out program, which subject(s) are your Title 1 students most likely to miss?" Of the teachers responding to this question, 31 percent stated their students who participate miss other enrichment activities. Social Studies and Science were both noted as being missed by 25 percent of the teachers, while Math was reported by only 8 percent of those being polled.

Figure 4.15



Chapter 5

Discussion

Summary

The first question in the survey asked, "In the past five to ten years have any of your classes been grouped by ability for classroom instruction?" The findings showed 56 percent of the elementary and middle school teachers had grouped some classes by ability levels. This data shows that even though the larger percentage of teachers were still grouping students by ability for instruction, that a good majority were beginning to move away from the rigid forms of grouping.

The second question asked, "If you have taught in an ability grouped setting in the past, for which subject areas?" Statistics revealed that 24 percent of the teachers had grouped all subject areas, while Reading was reported by 16 percent of those polled. The next question asked the same except the wording was changed from "in the past" to "at the present time". The majority, 51 percent, noted they were not grouping any of their subjects by ability. The next highest percentage, 19 percent, was for Math. These statistics show two things, ability grouping is no longer the predominant method used in teaching diverse ability levels of students and while most teachers have moved away from ability grouping, the majority that still do some grouping are grouping for Math instruction only.

Of the teachers polled, 55 percent said they generally group students by ability because the delivery of instruction is easier when all students are on the same level. This thinking was also the most noted reason found in the research for why ability grouping remains a common practice today in education.

Teachers were asked, "What criteria are used when grouping students by ability?" The findings showed that 36 percent use all three criteria listed, previous grades/academic achievement, test scores (CTBS or Special Education testing), and teacher perceptions.

"Students in the high ability group learn the material faster and therefore are able to cover more material over a year's time." This statement was presented to the teachers in question number six. Of those teachers in Randolph County responding to the survey, 51 percent agreed and 35 percent strongly agreed. These statistics were interesting to find when only 49 percent of those polled reported they were doing any grouping at the present time.

Another statement presented to the teachers in the survey was "Students who learn the material quickly make the teachers job easier and more enjoyable." Of the teachers responding to this statement, 46 percent agreed, and 9 percent strongly agreed. This statement was presented in the survey to see if the teacher's attitudes in Randolph County were characteristic of those found in the research.

One might suspect from this response that the teachers in Randolph County who completed the survey were typical of those found in other studies. Research noted that, seeking a more pleasurable experience, teachers often choose to meet with the fast track students first and for longer periods of time.

Teachers were asked, "Which group of students do you most enjoy instructing?" In response to this question 39 percent revealed they enjoy working with all levels grouped together. The low ability group was chosen less than any other group. This was not surprising to find with the response from the previous two statements.

In response to the question about methods used for instruction, 60 percent of the teachers indicated they use a multisensory approach to instruction. The next question asked was, "If you use a multisensory approach to deliver instruction, which approach do you use most often?" The study found that the hands on method of instruction was utilized most often at 44 percent. This finding was not surprising since the majority of the teachers polled were kindergarten through fifth grade instructors and because hands on (kinesthetic) instruction is the more favorable form of instruction noted for all learners.

Of the teachers responding to the survey, 20 percent said they incorporated cooperative learning 20 percent of the time, 30 percent of the time, and 50 percent of the

time. This style of teaching was introduced to teachers in Randolph County the latter part of the 1980's when the school system was moving away from the rigid forms of ability grouping and developing classrooms consisting of multilevel ability students.

The next question asked teachers, "What percentage of the time do you incorporate Mastery Learning?" Of those responding, 31 percent reported using Mastery Learning less than 10 percent of the time, while 28 percent reported using Mastery Learning more than 50 percent of the time. All other responses were dispersed fairly evenly among the 10 percent intervals from 10 percent to 50 percent. Mastery Learning is a fairly new concept to aid in the success of inclusive education.

Teachers were asked, "What percentage of your students participate in Title 1 Reading?" Only 31 percent of the teachers reported that none of their students participate. It was also asked, "What percentage of your students participate in Title 1 Math?" Only 28 percent of the respondents noted none of their students participate. The next question asked, "How are your Title 1 programs delivered?" Of those teachers responding, 59 percent indicated their Title 1 programs are inclusive. Title 1 began as a pull out program for students who needed additional assistance in Reading and/or Math. As a pull out program it is considered a form of ability grouping since

only those needing remedial help are given consideration. As an inclusive program all students benefit from the additional programs funded by Title 1 (a Federally Funded program). They also benefit from an additional instructor being available for smaller group interaction.

The final question in the survey asked, "If your Title 1 program is a pull out program, which subject(s) are your Title 1 students most likely to miss?" While most students, 31 percent, are missing other enrichment activities, 25 percent are missing out on subjects such as Social Studies and Science. This shows that not only are these students missing out on enrichment activities, but they are missing out on core subject areas in which they will be responsible for having previous knowledge in their future education when they may no longer qualify for Title 1 services or when Title 1 is not offered at their school.

Conclusion

The question asked in the Statement of the Problem was, "What is the effect of ability grouping on the academic achievement of middle school students?" The comparison of standard scores by the use of a t-test relect that there is no significant difference in the mean scores. The difference in the mean scores was 2.7. This shows that, academically, students did not do any better when in an ability group setting than while in an inclusive, heterogeneous setting.

In applying the data from the survey to the Statement of the Problem, over half of the teachers responding were grouping students by ability five to ten years ago whereas at the present time over half of the teachers responding are no longer grouping students by ability. This shows that many educators are moving away from the rigid forms of grouping students by ability. In fact, those that are still doing some grouping are only grouping for one or two subject areas. This would imply that educators no longer feel that grouping by ability is beneficial to students' achievement.

When teachers were asked, "What group of students do you most enjoy instructing?" the majority of those responding, 39 percent, said they enjoyed working most with all levels grouped together. When pairing this question with the question that asked, "What methods of teaching do you use to deliver instruction?" one would suspect that the teachers responding realize that the traditional paper/pencil assignments employed frequently in the past do not work for all students since 60 percent answered that they use a multisensory approach. Once again, this could indicate that educators are moving away from the rigid forms of grouping because they have begun to employ several methods of teaching to deliver instruction, thus seeing more success now in a heterogeneous setting than in the past.

Over half the teachers in Randolph County responding to the survey are now utilizing cooperative learning in their

classrooms at least 30 percent of the time. This method was introduced as a way of grouping students of varying abilities together in four to five member teams. This data shows that using a different method of instruction can aid in the success of all students.

Mastery Learning is also employed by more than half the teachers responding at least 30 percent of the time. This method of instruction which continues to teach the skill in various ways until it is mastered is frequently used in Special Education and becoming more employable in regular education with inclusive education on the rise.

The Title 1 program which use to be exclusively a pull out program, another form of ability grouping, is now turning to an inclusive program. Students who would normally have been "pulled out" of their regular classroom for remediation and/or enrichment activities are now receiving that instruction along with their other classmates in the regular classroom. This was noted in the survey with 59 percent indicating this change. This shows that education funded by Federal Programs is also eliminating the rigid forms of ability grouping which could make one speculate that ability grouping has been found to be ineffective.

Recommendations

The recommendation formed from this research would be to do additional studies in the coming years. Inclusive

education is just recently becoming popular in this state. Along with inclusion, paradigms are shifting. Teachers are learning and employing new methods of instruction to help ensure the success of all students. Educators are beginning to understand that all students deserve to be exposed to the material being taught in all classrooms. Educational needs of all students can be met by teachers adding new methods of instruction such as cooperative learning and mastery learning, and instructional adaptations such as reducing the length of assignments to their repertoire. As educators begin seeing more students showing success they hopefully will become more enthusiastic about trying the new programs and methods. Future studies could then reflect that students benefit more from heterogeneous grouping.

The recommendation also suggests that these additional studies include a larger sampling of students. Data for the testing instrument could also be a comparison of semester and yearly grades rather than or along with achievement test scores.

Appendix A

t-test

Data Table 1

	A 3rd gr. math Y	B 6th gr. math Y
1	56.0	42.0
2	95.0	88.0
3	72.0	46.0
4	69.0	49.0
5	79.0	80.0
6	61.0	65.0
7	25.0	49.0
8	39.0	28.0
9	59.0	6.0
10	41.0	71.0
11	69.0	39.0
12	24.0	58.0
13	86.0	38.0
14	44.0	77.0
15	62.0	39.0
16	90.0	88.0
17	97.0	89.0
18	84.0	75.0
19	12.0	41.0
20	44.0	55.0
21	29.0	47.0
22	34.0	38.0
23	86.0	76.0
24	51.0	45.0
25	32.0	44.0

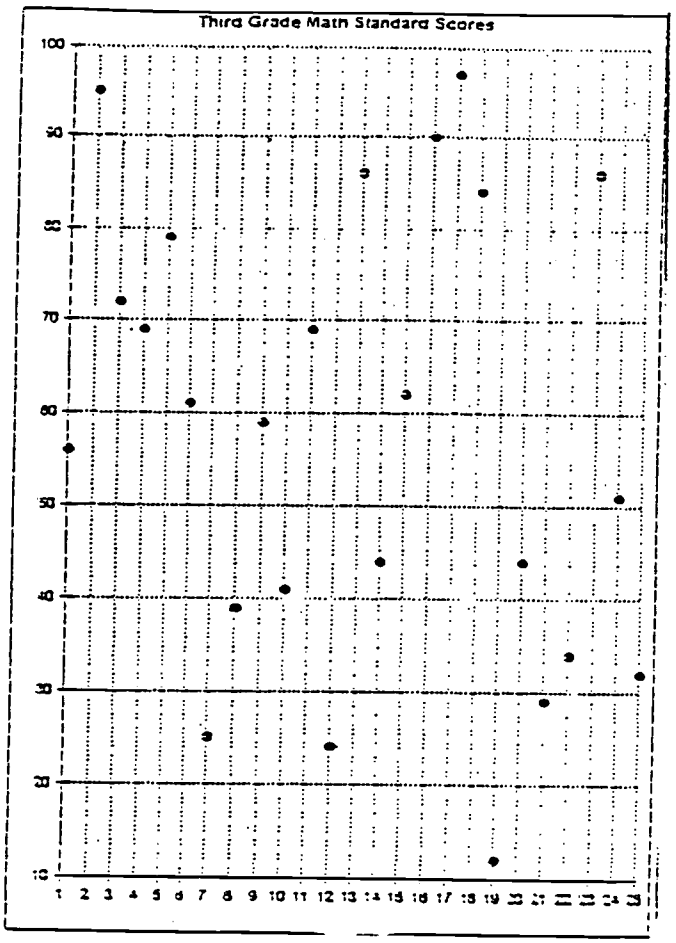
t-test
Tabular results

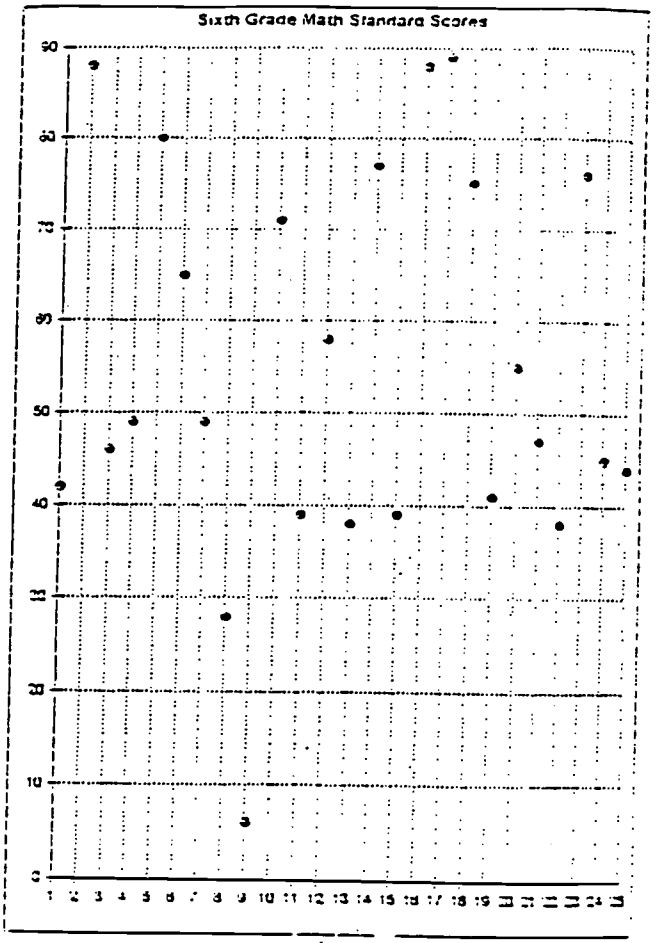
X Labels	A
Parameter	Value
X	Y
Table Analyzed	Data Table-1 Columns A and B
Unpaired test	
P value	0.6815
P value summary	ns
Are means sign. different? (P <0.05)	No
One or two-tailed P value?	Two tailed
t, df	t= 0.4129 df= 48
How big is the difference?	
Mean ± SEM of Column A	56.60±4.934 N=25
Mean ± SEM of Column B	54.92±4.217 N=25
Difference between means	2.680±6.491
95% confidence interval	-15.74 to 10.38
R squared	0.003539
F test to compare variances	
F, DFn, Dfd	1.369, 24, 24
P value	2238
P value summary	ns
Are variances significantly different?	No

t-test
Column statistics

X Labels	A	B
X Labels	3rd gr. math	6th gr. math
X	Y	Y
Num. of values	25	25
Minimum	12.00	6.00
25% Percentile	39.00	41.00
Median	59.00	49.00
75% Percentile	72.00	71.00
Maximum	97.00	89.00
Mean	57.60	54.92
Std. Deviation	24.67	21.95
Std. Error	4.934	4.217
Lower 95% Cl	47.42	46.22
Upper 95% Cl	67.78	63.62

Scattered X,Y Graph
Comparison of Standard Scores





Appendix B

Survey for Master's Thesis:
The Study of the Effectiveness of Ability Grouping on the Academic Achievement of Middle School Students

Please circle your answer:

1. In the past five to ten years have any of your classes been grouped by ability level for classroom instruction?

yes no

2. If you have taught in an ability grouped setting, for which subject areas?

Reading Math Lang. Arts Other All None

3. At the present time are any of your subjects grouped by ability?

No Reading Math Lang. Arts Other

4. What reasons do you generally group by ability? (circle all that apply)

a. Delivery of instruction is easier when all students are all on the same level.
b. Material covered is too difficult for some students.
c. Small group instruction is more beneficial.
d. School principal's decision

5. What criteria are used when grouping students by ability? (circle all that apply)

a. previous grades/academic achievement
b. Test scores (CTBS or Special Ed. Testing)
c. teacher perceptions

6. The students in the high ability group learn the material faster and therefore are able to cover more material over a year's time.

strongly disagree disagree agree strongly agree

7. Students who learn the material quickly make the teacher's job easier and more enjoyable.

strongly disagree disagree agree strongly agree

8. Which group of students do you most enjoy working with?

a. high ability
b. average ability
c. low ability
d. all levels grouped together

9. What methods of teaching do you utilize to deliver instruction?

Lecture Hands-On Chalkboard/Overhead Projector

Study Sheets/Handouts

10. If you use a multisensory approach to deliver instruction, which do you use most often?

Lecture Hands-On Chalkboard-Overhead Projector

Study Sheets/Handouts

11. What percentage of time do you incorporate cooperative learning in your classroom?

less than 10% 10% 20% 30% 40% 50% more than 50%

12. What percentage of time do you incorporate Mastery Learning?

less than 10% 10% 20% 30% 40% 50% more than 50%

13. What percentage of your students participate in Title 1 Reading?

0% 5% 10% 20% 30% 40% 50% more than 50%

14. What percentage of your students participate in Title 1 Math?

0% 5% 10% 20% 30% 40% 50% more than 50%

15. How are your school's Title 1 programs delivered?

pull-out in-class

16. If your Title 1 program is a pull-out program, which subject(s) are your Title 1 students most likely to miss?

Reading Math Social Studies Science Lang.Arts

Other

Appendix C

100 Alexander Ave.
Elkins, West Virginia 26241
November 25, 1996

Mr. Larry Prichard
40 Eleventh Street
Randolph County Board of Education
Elkins, West Virginia 26241

Dear Mr. Prichard,

I am writing to request permission to conduct a written survey with the teachers in grades kindergarten through eighth in Randolph County Schools. This survey will be used to gain infromation on how teachers in Randolph County group students for instruction. I am presently working on a Master's thesis, The Study of the Effectiveness of Ability Grouping on the Academic Achievement of Middle School Students. This information will provide an essential element to the methodology section of my paper.

Sincerely,

Barbara G. Phares

Appendix D

100 Alexander Avenue
Elkins, West Virginia 26241
November 25, 1996

Mr. Larry Prichard
40 Eleventh Street
Randolph County Board of Education
Elkins, West Virginia 26241

Dear Mr. Prichard,

I am writing to request permission to collect standard test scores from the California Test of Basic Skills (CTBS) from twenty-five 7th grade student files at Elkins Middle School. These students will be chosen at random with the only criteria being that they were in an ability grouped setting for Math instruction during their third grade year. Student names will not be recorded or used for the data collection; only standard scores. This information is a vital part of the methodology section of my Master's thesis, The Study of the Effectiveness of Ability Grouping on the Academic Achievement of Middle School Students.

Sincerely,

Barbara G. Phares

Barbara G. Phares

Randolph County Schools

40 ELEVENTH STREET, ELKINS, WV 26241
Telephone (304) 636-9150
FAX (304) 636-9157

LARRY G. PRICHARD
Superintendent of Schools

December 17, 1996

Mrs. Barbara Phares
100 Alexander Avenue
Elkins, WV 26241

Dear Mrs. Phares:

I have received your request to conduct surveys in the County as a part of your Masters Program and am in agreement with your request.

I ask that you provide the administration (Superintendent's office) with a copy of your final results and ask that you meet with me and go over the items, what they measure, and your opinion of the results.

As always, we are willing to assist in any way possible those who further their education.

Sincerely,

Larry G. Prichard, Superintendent
RANDOLPH COUNTY SCHOOLS

LGP:dja

Education Today For A Better Tomorrow

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