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ABSTRACT

The fourth in a series of studies investigating the educational context and outcomes for high school students with disabilities (SWDs), this study examined types of courses in which SWDs are being enrolled, and the role perception of special education teachers. Twenty-one special education teachers from three high schools in urban areas, three in suburban areas, and three in rural areas participated. Results indicate teachers believed their most important role was to teach learning strategies to the students and to work with their general education teachers. They believed the students' greatest needs with regard to succeeding in general education classes were learning strategy instruction and homework assistance. When asked how they spend their time, they reported that they spend some time teaching learning strategies, and their estimated time in this activity ranged from about 15% to 90% of the time they spend on academic activities. Most of the schools did not seem to have a clear plan for giving SWDs real access to rigorous general education courses and for supporting their success in those courses, and only one program was utilizing research-based instructional programs and materials. Teachers indicated that they were not satisfied with student outcomes. (Contains 23 references.) (CR)

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Research Report #4

The educational context and outcomes for high school students with disabilities: Special education programs and the perceptions of special education teachers

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Introduction

In the 1997 reauthorization of IDEA, Congress sought to markedly improve student outcomes by specifying nine target goals. Some of these goals included (a) improving the scholastic performance of students with disabilities, (b) ensuring that these students have real access to the general education curriculum, (c) supporting their successful transitions; (d) providing placement in the least restrictive environment; and (e) preventing school dropout (IDEA, Section 1474(b), 1997). Additionally, Congress mandated that a national evaluation be conducted by the Department of Education to determine the degree of implementation and progress in meeting these major goals (U. S. Department of Education, 1999).

For high schools in today's educational climate, fulfilling these mandates can be especially difficult. A large majority of the states (48) are requiring students to take state competency exams and schools to be accountable for the results. Eighteen states are requiring students to pass these exams before they can graduate from high school (Olson, 2000). As a result, schools have been increasing the educational requirements in their subject-area courses, requiring teachers to teach more and expect higher levels of performance from students. Textbooks are getting thicker, and the information is becoming more and more complex.

Students with disabilities are often entering today's high schools with skills that do not match up with the demands that they face. On average, students with learning disabilities, the largest population of students with disabilities, are reading and writing at the 4th- grade level and doing math at the 5th-grade level (Warner, Schumaker, Alley, & Deshler, 1980). They often do not know how to write a complete sentence, and they are required to write themes. Typical high school textbooks are written at the 10th to 17th-grade levels of readability, and they are reading, on average, at the 4th-grade level. They are expected to pass algebra courses for graduation, yet they often do not know the basic math facts and cannot do basic math operations like multiplication and division of multi-digit numbers (Schumaker & Deshler, 1984).

Fortunately, over the past twenty-five years, research has been conducted to develop and validate a number of instructional methods for helping these students succeed in required general education courses (Swanson, 1999, 2001). For example, several instructional programs have been developed for teaching students learning strategies that they can use to meet the demands of their high school courses (e.g., Hughes, Schumaker, Deshler, & Mercer, 1988; Hughes, Ruhl, Deshler, & Schumaker, 1995; Schumaker & Lyerla, 1991; Schumaker & Sheldon, 1985). These instructional programs have been empirically validated as effective in ensuring that students can complete the same kinds of academic tasks that they face in school (see Schumaker & Deshler, 1992 for a review). In addition, several teaching routines have been developed that teachers can use to present the content in their courses in order to enhance students' understanding and memory of the content (see Schumaker, Deshler, & McKnight, 2002 for a review). Additionally,

several instructional methods have been validated for general use. For example, elaborated feedback has been shown to be effective in substantially reducing the number of trials to mastery as students practice new skills (Kline, Schumaker, & Deshler, 1991). Clear models have been shown to increase students' performance on tests (Gildroy, 2001). Also recently, a method of providing homework assistance to students while also teaching them strategies has been validated (Hock, Pulvers, Deshler, & Schumaker, 2001).

Unfortunately, little research has been conducted to determine whether these validated methods are actually being used in today's schools to support students' meaningful access to the general education curriculum. The few studies that have been conducted in secondary schools are not encouraging. Kea (1987) asked special education teachers who were and who were not participating in professional development workshops to volunteer to be observed. Teachers participating in the workshops met six times with a trainer who taught them how to teach learning strategies. One session focused exclusively on nine critical teaching behaviors that had been identified through the literature on effective teaching (giving rationales, communicating expectations, using organizers, using reviews and checks, facilitating independence, ensuring intensity of instruction, monitoring, providing feedback, and requiring mastery). In another session, the teachers reviewed the nine critical teaching behaviors. The fifteen teachers participating in the workshops (experimental teachers) were observed once before and once after the training series for one class period. The remaining 15 teachers were observed once, after the training series had been completed, and they served as the comparison group.

Kea found that seven of the experimental teachers engaged in strategy instruction at the end of the study, and none of the comparison teachers did. She found almost no differences between the two groups of teachers with regard to the amount of time they spent in engaging in the nine critical teaching behaviors. All of the teachers engaged in these behaviors infrequently. For example, they spent, on average, 4% of the observational intervals engaged in giving feedback to students. Although all of the teachers used brief feedback (e.g., "Good job!"), only 20% of the experimental teachers gave specific corrective feedback for incorrect responses. None of the teachers required mastery of a skill.

In another study, Kline, Deshler, & Schumaker (1992) studied a group of 57 secondary teachers who committed to teach learning strategies to their students in at least one class period per day. The teachers kept daily written logs about their instruction. Of the 5070 class periods allotted for strategy instruction, 35% were interrupted so severely that the learning strategy instruction did not take place. In the remaining periods, there were 2139 student absences.

In one more study focused on the time secondary special education teachers were spending teaching students strategies, Kline et al. (1992) studied three high school special education programs across a two-year time span. In the first year, they studied Programs A and

B. In the second year, Program B's school district opened a new high school, so Program C was added to the study. A time-sample observation system was employed to determine the percentage of intervals the teachers and students were spending in instructional activities. During Year 1, teachers in Program A spent, on average, 55% of the intervals engaged in instructional activities, and students spent, on average, 69% of the intervals engaged in instructional activities. These intervals were almost evenly divided between learning strategy instruction, tutorial help, and remedial instruction. Teachers and students in Program B spent, on average, 38% and 66% of the intervals in instructional activities. These intervals were spent mostly on remedial instruction and some on tutorial assistance.

At the end of the first year, researchers discussed with the teachers in Program A how they might increase the amount of time they and students were spending in instructional activities. They adopted a set of policies and procedures to be followed by all of the teachers and students in the program. For example, they stated that at least 70% of a student's time in the classroom would be spent on learning strategy instruction and that each student would master three to four learning strategies per year. Observational results gathered during the second year showed that teachers and students in Program A spent an average of more than 70% of the intervals in learning strategy instruction and less time on tutorial and remedial instruction. Teachers in Programs B and C spent the majority of their time on tutorial assistance and almost no time on strategy instruction.

These results are cause for concern because they indicate that special education programs were not focusing on the use of validated instructional methods for ensuring student success in the general education curriculum. Since then, at least ten years have transpired, and a national dissemination effort has been developed and carried out for training secondary special education teachers in validated instructional methods (Deshler & Schumaker, 1996). However, no research has been conducted recently to determine whether high schools are using these research-based methods and actually enrolling students with disabilities in rigorous general education subject-area courses. Thus, the purpose of this study was to gather information about what is actually happening in high school special education programs and the types of courses in which students with disabilities are being enrolled in order to progress toward high school graduation. Another purpose was to gather information from the teachers about their roles, their beliefs about what they should be doing in their roles, and their satisfaction with various aspects of the programs that had been developed in their schools.

Methods

Settings

Nine public high schools serving grades nine through twelve in four states participated. Three types of high schools participated. Three of the high schools (hereafter referred to as "urban high schools") represented schools located in high-density areas (i.e., urban/metropolitan areas populated by more than 150,000 people). They were also schools in which more than 50% of the student population was comprised of "students living in poverty." "Students living in poverty" were defined, for the purposes of this study, as students who had applied for and received free or reduced lunch privileges. Three of the high schools (hereafter referred to as "rural high schools") represented schools located in low-density population areas (i.e., towns of less than 10,000 people and less than 150 people per square mile) and in which more than 10% of the student population was comprised of students living in poverty. Three of the high schools (hereafter referred to as "suburban high schools") represented schools that were located in towns having a population of more than 45,000 people and less than 150,000 people and in which less than 10% of the student population was comprised of students living in poverty.

The student populations in the urban schools ranged in size from 1,031 to 3,508 students, while in the rural schools the populations ranged in size from 330 to 693 students. The student populations in the suburban schools ranged in size from 931 to 1,691 students. (For more information on the participating schools, see Schumaker, Deshler, Lenz, Bulgren, Grossen, Davis, & Marquis, 2002).

Observations took place in the special education class setting in each school. This was defined as any classroom or space in which a student with disabilities was receiving services to assist him/her with regard to succeeding in general education courses.

Subjects

Teachers. The 27 participating special education teachers were teachers who were providing special education services to students with disabilities as defined above in the participating schools. They all volunteered and signed consent forms to participate. Twenty of the teachers were females; 7 were males. With the exception of one African-American and one other person representing a minority population, all were white. All but one had Bachelor's degrees, and 16 had Master's degrees. All but one was certified to teach in their states. Twenty-three were certified to teach special education classes. Their mean age was 45.5 years (range = 26 to 64 yrs.), and they had taught for an average of 12 years (range = 1 to 34 yrs.). They reported that they had completed an average of 18 credit hours in special education courses at a university (range = 1 to 90 hrs.) and had attended 30 hours of inservice training (range = 1 to 99 hrs.).

Students. The students who participated in this study were the students with disabilities who were present in the classrooms during the class periods that the special education teachers had scheduled for observations. They were students who had been formally classified as having a disability (e.g., a learning disability, emotional disorder/disturbance, behavioral disorder, physical handicap, visual impairment, hearing impairment, or other health impairment) according to state guidelines. They were students who were expected to earn standard high school diplomas by their special education teachers. They were students who had either been enrolled in one or more rigorous general education courses or who were judged by their special education teachers as students who could have been enrolled in one or more rigorous general education course successfully if they had had the appropriate instructional support. A rigorous general education course was defined as a course which was required for high school graduation that was taught by a general education teacher and in which a diversity of students, including high achievers and normal achievers, were enrolled. Hereafter, this will be the only type of student with disabilities (SWD) referred to in this report.

All students and their parents were informed about the purpose and procedures of the research project and signed informed consent forms indicating their willingness to participate or their permission for their child to participate.

Measurement Instruments

The special educators completed four forms. The purpose of the **Special Education Teacher Information Form** was to gather personal information about the teachers. The form contained 27 items that focused on such information as the teacher's age, race, sex, educational history, teaching certifications, and history as a teacher. For the most part, teachers filled in blanks on the form to respond to questions asked about such information as their age, number of years of teaching, and the number of special education courses they had taken. For some items, like for gender, they were given options to choose between or among. (Information derived from this form was reported above in the Subjects Section.)

The purpose of the **Special Education Teacher Questionnaire** was to gather information about the teachers' perceptions of their roles as special educators, how they spend their time at school, how they make decisions about how students will be enrolled in courses, their beliefs about what the students need in order to succeed in rigorous courses, barriers to students' success, and the types of training they felt they needed to help students succeed. Some of the questions on the questionnaire were open-ended, and the teachers wrote in their responses in phrases or sentences. Some of the questions asked the teachers to rank the items in a list of items indicating the most important factor as "1" the second most important factor as "2," and so forth. Still other questions asked the teachers to specify the percentage of time or the number of

hours per week that they spent engaging in a certain activity, and they wrote in numbers to respond to these items.

The purpose of the **Special Education Teacher Satisfaction Form**, the third form that special education teachers completed, was to gather their satisfaction ratings related to the educational program for students with disabilities in their school, its outcomes, and their own performance as teachers. The questionnaire included 47 items formatted with a seven-point Likert-type scale ranging from "1" (Completely Dissatisfied) to "7" (Completely Satisfied). The items were organized in six sections: those pertaining to how the general education teachers work with the special educator; those pertaining to the instruction provided by the general education teachers for the SWDs, those pertaining to progress reports created by general educators and shared with the special educator; those pertaining to student outcomes; those pertaining to professional development experiences in which the special educator had participated; and those pertaining to the special educator's own assessment of his/her performance with regard to ensuring SWDs' success (grades of C or above) in general education classes.

Additionally, the special educator in charge of the special education program in the school and housed in the school was asked to fill out the **Special Education Services Form**. This form was designed to gather information about the special education services being offered in the school. Items related to the types of special education teachers and support staff working in the school, the numbers of each type of student with an exceptionality served in each general type of program (e.g., resource, self-contained), and names of the specific programs designed to support students with disabilities in rigorous general education classes.

In addition to completing the forms, the special education teachers were observed teaching in their classes with the **Special Education Teacher Observation System**. This system was a time-sample recording system comprised of a recording sheet and a behavioral code. On the recording sheet were columns in which the observer recorded the teacher's behavior and other factors associated with the instruction taking place during 10-second intervals. In the first column, the observer recorded the teacher's behavior using a few words or a phrase. In the remaining columns, the observer placed tallies indicating whether or not the behavior was instructional or noninstructional, whether or not the instruction was research-based, the type of motivational and instructional methods being used, the instructional approach being used, the instructional arrangement that had been created for the students, the materials being used by the students, and the sensory modalities being used by the students. The observer also indicated the number of students and teachers with whom the special education teacher was interacting during the interval.

During the same class period that the teachers were observed, the students who were present in that class were also observed using the **Student Support Class Observation System**. Like the system used to observe the teachers, this system was also a time-sample recording system comprised of a recording sheet and a behavioral code. On the recording sheet were columns in which the observer recorded the student's behavior and other factors associated with the ongoing instruction during 10-second intervals. In the first column, the observer recorded the target student's behavior using a few words or a phrase. In the remaining columns, the observer placed tallies indicating whether or not the behavior was instructional or noninstructional, whether or not the instruction during that interval was research-based, the type of academic response the student had made, the instructional approach being used with the student, the materials being used by the student, the instructional grouping in which the student was included, and the sensory modalities being used by the student. The observer also indicated the number of students and teachers with whom the student was interacting during the interval.

Additionally, the observers completed two forms after observing the teachers and the students at the end of each class period. The first form, called the **Classroom Climate Checklist**, contained nine items representing the type of classroom climate the teacher had created in the classroom. For example, some of the items included whether the classroom was neatly arranged, whether there were motivational posters in the room, and whether there were instructional posters or aids in the room. The observer simply checked "Yes" or "No" to indicate that the item was present or absent in the room.

The second form, called the **Class Description Form**, contained seven items related to what had transpired during the class period. For example, the first item asked the observer to provide a general description of the lesson, the fourth item asked the observer to describe the relationship between the target student and other students, and the sixth item asked the observer to describe the general outcome of the class for the target student. All of the items were open-ended, and the observers wrote their answers in sentence form under each item.

Finally, the observers completed a form called the **School Description Form** after working in a school to gather the data for the whole project. The items on this form were open-ended and basically asked for the observer's impressions of different aspects of the school. Two items on this form are pertinent to this article. First, the observer was asked to describe how students who had been formally classified as having disabilities meet graduation requirements in the given school. Second, the observer was asked to describe the programs observed in the school which had been specifically designated for supporting SWDs who are enrolled in rigorous general education courses.

Procedures

The special education coordinator in each school was contacted and asked for a list of teachers on the special education staff who were serving students with disabilities who were enrolled in general education classes as well as the times that those students were being served in some sort of a support class setting. In one of the urban schools, the researchers were told that students are not served in a support class setting. The other schools identified the resource room program as the setting in which the students were being served.

The teachers on the list made by the special education coordinator were contacted individually. The research project was explained to them, and they were asked to participate. If they indicated an interest in participating, they were asked to read and sign the consent form and to fill out the three forms mentioned above (the Special Education Teacher Form, the Types of Classes Form, and the Special Education Teacher Satisfaction Questionnaire). The purpose of the form and the way each form was to be filled out was explained to the teacher, and the teacher's questions were answered. The teachers filled out the forms on their own time.

Next, a researcher visited the resource room/support class during each class period in which SWDs were being served there. He/she described the research project to the students and what they would be asked to do. The students were given consent forms to take home to have their parents sign. They were also asked to sign the forms if they were interested in participating in the project.

The teachers were then asked to indicate when they might be observed teaching SWDs who were enrolled in rigorous general education classes. Specific times were scheduled for observations. The goal associated with the observations was to observe at least three class periods of instruction with as many different teachers who were serving this population as possible. However, in some schools this was not allowed or, in some cases, possible.

The researcher explained that the observer(s) would visit the scheduled class periods and would be writing down the activities of the students and the teachers present in the classroom on observation sheets. They might have to move around the classroom in order to see what students were doing, but they would be as unobtrusive as possible. The teachers were asked to go about their normal activities and ignore the observers' presence in the classroom. They were also asked to introduce the observers to the students and to instruct the students to go about their activities normally and to ignore the presence of the observers.

Upon arriving in a classroom at the designated time, the observers made a list of the participating students in the far left-hand column of the Student Observation Sheet (see Appendix A) by noting a visual cue associated with the student (e.g., yellow baseball cap, brown jacket). The observers also made a similar list of the teachers and other adults in the classroom (e.g., paraprofessionals) on the Teacher Observation Sheet (see Appendix B). These lists

indicated the order in which the people would be observed. Each list was repeated as many times as would fit on the first observation sheet. Each list was also copied repeatedly onto as many observation sheets as were needed to observe the whole class period. The observers completed one Teacher Observation Sheet, and then they completed one Student Observation Sheet. This was referred to as "one loop" of observations. Then a new loop of observations began and so forth until the bell rang at the end of the hour.

To complete one observation interval for one person, each observer located that person and started a stopwatch. (If two observers were present, they started their stop watches at the same time.) The observer watched the person for ten seconds. Then the observer wrote down the first instructional behavior in which the person was engaging according to a set of behavioral definitions and filled in the rest of the columns on the observation sheets to categorize the behavior, also according to a set of definitions. If no instructional behavior occurred during the 10-second interval, the first non-instructional behavior observed during the interval was recorded in a few words. Then the observer moved on to observe the next person in the list. At the end of the class period, each observer completed the Classroom Climate Checklist and the Class Description form.

Results

Special Education Teacher Survey Results

Twenty-one special education teachers in eight of the nine schools completed the Special Education Teacher Survey. There was only one special education teacher in one of the suburban schools, and she did not complete the survey.

Teachers' main roles. Table 1 shows the percentage of top three rankings that the special education teachers gave when asked what they consider to be their main roles in supporting the success of SWDs who are enrolled in general education courses. The largest percentage of top three rankings was awarded to teaching learning strategies; the next largest to consulting with general education teachers about problems and accommodations. Other roles such as helping with homework, teaching them prerequisite skills, and providing remedial instruction received fewer but several rankings. The role that received the most #1 rankings was teaching learning strategies that students can use to succeed in courses.

Support needed by students. Table 2 shows the percentage of top three rankings that were awarded by special education teachers with regard to the kinds of support SWDs need most in order to succeed at the "C" level or above. Again, the largest percentage of top three rankings was given to learning strategy instruction, closely followed by consulting with general education teachers. (Half of the #1 rankings were awarded to learning strategy instruction.) Interestingly, the teachers indicated next that they thought students needed homework support, followed by instruction in prerequisite skills, and preparation for tests.

Considerations for enrollment in general education courses. Table 3 shows the percentage of top three rankings teachers awarded to the considerations they take into account when they enroll SWDs in particular general education courses. The consideration with the most top-three rankings was the teacher's attitude about having these students in their classes (half of the #1 rankings were given to this consideration) followed by the instructional methods the teacher uses. Other highly ranked considerations were the success SWDs have in the teacher's class, the accommodations the teacher uses, and the teacher's personality. Teachers in one suburban school indicated that SWDs are placed in classes by the computer, just like other students.

General categories of work time. Table 4 shows the mean percentages of time that the teachers indicated that they spend in three major categories of activities: addressing academic needs of students, addressing social, behavioral, or transition needs of students, and dealing with paperwork.* Across all the special education teachers in all the schools, the percentage of time that they reported spending in each category was relatively equal, with a little more time spent on addressing academic needs. For the most part, this reporting pattern was similar for teachers in the urban and rural schools. However, the teachers in one suburban school reported spending a mean of 66% of their time on academic needs.

Categories of time spent addressing academic needs. Table 5 shows the mean percentages of time that the teachers reported that they spend in activities related to responding to academic needs. As a group, they reported spending about a quarter of this time (one fourth of 30% or 3 hrs. per week) on teaching learning strategies, teaching subject-matter courses, and providing remedial instruction. Less time was spent on other activities.

However, this picture does not hold true when the data are examined for individual schools. Most of the teachers in urban and rural schools reported spending, on average, about 15% of their academic time on teaching learning strategies. Teachers in one of the suburban schools reported spending 90% of their academic time on teaching learning strategies, and teachers in one of the urban schools reported spending 66% of their time in this same activity. Otherwise, there was little variability from the general pattern.

Categories of time spent addressing social, behavioral, or transition needs of students. Table 6 shows the mean percentages of time teachers reported spending on different activities related to addressing the social, behavioral, or transition needs of students. The general pattern indicates that the teachers spent about equal portions of this time on dealing with discipline

* Please note that in all the tables which contain data on percentage of time spent on different activities, the numbers may not add up to 100%. The teachers supplied numbers that were averaged even if the numbers did not add up to 100%.

problems, developing transition plans and holding meetings, counseling students, and supporting general education teacher's concerns in this area. This general pattern of reporting holds true for most of the schools except that teachers in two of the suburban schools reported spending at least a third of this time (and in one suburban school more than 40% of this time) on transition plans, meetings, and working with general education teachers.

Categories of time spent on dealing with paperwork. Table 7 shows the percentages of time teachers reported spending on various activities while they were engaged in paperwork. The teachers reported that almost half of their time in this area is spent on activities related to IEPs. The remainder of time is divided among the other categories of paperwork. This pattern holds true for all of the schools with the percentage of paperwork time spent on IEPs ranging from 35% to 58%.

Hours per week spent on general education activities. When asked how many hours they spend per week on consulting with general education teachers about problems and accommodations, teaching general education classes, and planning instruction for these classes, the teachers' reports varied widely across the schools.(See Table 8.) In one rural school, the teachers did not engage in any of these activities. Teachers in five of the schools did not spend any time teaching general education classes, whereas teachers in the other schools spent an average of 1 to 9 hours per week teaching general education courses. Teachers in the rural schools reported spending an average of 12.5 hours per week consulting with general education teachers (as many as 15 hours in one school), whereas teachers in other schools reported spending as little as an average of 1 hour per week consulting with general education teachers (range = 1 to 6 hours).

Special Education Services Results

Special education services descriptions. Research assistants described the high schools as very different with regard to how SWDs were meeting course requirements for graduation and the kinds of support services that were available to help them succeed in rigorous courses. Several types of courses in which SWDs were enrolled for meeting graduation requirements emerged from the reports: (a) subject-area courses designed for SWDs (and sometimes for other at-risk students) and taught by a special educator, (b) subject-area courses designed for SWDs and other at-risk students and taught by a general educator (and sometimes co-taught with a special educator), and (c) rigorous courses in which heterogeneous groupings of students were enrolled and which were taught by a general educator. The descriptions for the nine schools were as follows.

Suburban School #1. SWDs in this school are generally not enrolled in rigorous general education courses. The large majority of SWDs are taught subject-area courses in the special education classroom. Several grade levels of students are present in the same class period taught

by one special educator. There were no specific classes in this school to provide support for SWDs in rigorous general education courses. If a SWD needs help with an assignment in a general education class, the student typically requests assistance from the special education teacher during subject-area classes in the special education classroom. For example, a student enrolled in a rigorous math course might ask for help during an English class in the special education classroom. There is a small room in which two or three people can be present and which students can visit if they need help with their homework. There is a special education teacher present in this room during posted hours (e.g., two periods per day).

Suburban School #2. In this school, SWDs attend a resource program for one or two hours per day where they receive instruction in learning strategies. Over the course of their high school tenure, they learn a variety of strategies (e.g., reading, writing, study, self-advocacy strategies) to help them succeed independently in their courses. They are enrolled in general education subject-area courses along with a variety of different types of students (these courses will hereafter be referred to as "rigorous courses"). There are no required courses taught by special education teachers and no "low track" courses specifically designed for SWDs and other low-achieving students in this school.

Suburban School #3. The majority of SWDs in this school are enrolled in low-track general education courses. They each are also enrolled in the resource room for study time and extra assistance. Observers noted that the students worked independently in the resource room on their homework assignments from other classes.

Urban School #1. In this school, only a few SWDs are enrolled in rigorous subject area courses. A few more are enrolled in low-track courses like "Basic Biology" and "Basic Math" along with other at-risk students. These courses are taught by general education teachers. The large majority of the SWDs are enrolled in subject-area courses in the special education classroom taught by special educators. There is no class or program that is specifically designed to support SWDs' enrollment in rigorous courses or to teach them the skills they need to succeed in these courses.

Urban School #2. In this school, the large majority of SWDs (85%) meet most, if not all of their graduation requirements by enrolling in courses taught by special education teachers. The courses have special names (e.g., Interrelated English, Interrelated Math, Interrelated Biology). In one class period and one classroom, for example, SWDs who are enrolled in three different grade levels of Interrelated English might work with the same special education teacher. Students enrolled in these courses ask their special education teacher for help with homework for other courses during the scheduled time for these interrelated courses. There is no program specifically designated for helping SWDs succeed in the general education curriculum.

Urban School #3. In this school, there is at least one section of every required course taught by a special education teacher. The large majority of the SWDs are enrolled in these sections. Some SWDs are enrolled in sections taught by a general educator. No in-class support is provided in the classes taught by a general educator. If students need assistance, they contact a special education teacher before or after school or during lunch hour. There is also a resource program in which students are taught prerequisite skills for success in the general education curriculum according to their IEPs. There is no program specifically designed for supporting SWDs in general education courses.

Rural School #1. Approximately 30% of the SWDs in this school take some rigorous general education courses. Some of the SWDs take "basic" or low-track courses with other at-risk students. These courses are taught by general education teachers. The majority of the SWDs take required courses in the special education classroom taught by a special education teacher. There is no program in the school specifically designed to support SWDs enrolled in rigorous general education courses. If students need help on assignments, they ask their special education teachers for assistance during subject-area classes taught by those teachers.

Rural School #2. Most SWDs in this school are enrolled in rigorous general education courses at least for the first two years of high school. A paraprofessional might be present in a class to help SWDs if needed. If a course is too difficult for a student to complete in the allotted time, the student might be given an extra semester or two to finish the work. The algebra course has been modified so that students can take the course across two years instead of one. Some English and math courses are taught by a special education teacher. Some students are given accommodations such as a "peer notetaker" to support them in their courses. If rigorous courses are too difficult for a student, the student is enrolled in a supervised work-study program or technical school for a large portion of the day. SWDs attend the resource room for one to three hours per day to complete homework, take tests, and work on skills like English grammar.

Rural School #3. SWDs in this school take required courses that are co-taught by a general education teacher and a special education teacher. There are two levels of required courses taught in the school: upper and lower level college prep. courses. SWDs are bunched into the lower level sections of these courses (approx. 4 SWDs per class). The special education teachers sit at the back of the class until students are given an assignment. Then they circulate among the students and provide assistance. There is also a resource program where students learn basic skills and the prerequisite skills for taking the courses required for graduation. There is no program specifically designed to support SWDs' success in general education courses.

Special education services reported by coordinators. Table 9 shows the services available to SWDs across the schools according to the person given administrative responsibility for the special education program who was housed in each school. Sometimes, this person was one of

the special education teachers. Respondents in three of the schools reported that resource services were available to SWDs enrolled in rigorous general education courses. (These reports corresponded to the research assistants' reports.) In one of the suburban schools, these services included instruction in learning strategies. Respondents in eight of the schools indicated that some subject-area courses were being taught by special educators specifically for SWDs. The only school in which these courses were not available was the school in which learning strategies were being taught. The respondents also reported that five of the schools offered study halls, and in four of the schools special education teachers were co-teaching subject-area courses with general educators. In four of the schools, they reported that some sort of tutoring was available outside the resource room (e.g., in an after-school program). They also reported that all of the schools had counseling services available for students and educational assistants.

Numbers of students being served. Table 10 shows the numbers of students who have any kind of exceptionality (including gifted students) and who were being served in three different types of programs: resource room, self-contained classes, and monitoring only in each of the high schools. Table 11 shows summary data for the three types of schools (suburban, rural, and urban). The data indicate that the special education administrators reported that all of the schools were serving some students in a resource, pull-out type program, which contradicts the research assistants' observations described above. (In several of the schools, the research assistants did not see students enrolled in resource-type programs in the special education classroom; instead, they were enrolled in subject-area classes in the special education classroom.) Six of the schools, two in each of the three geographical locales (suburban, urban, and rural), served students in some sort of a self-contained environment. With the exception of one suburban school, which had a large population of gifted students who were monitored, only a few students were enrolled in a full day of general education classes in each school, and their performance was monitored by the special education teachers. Thus, in these schools, most of the students with exceptionalities were enrolled for some portion of the school day in the special education classroom.

Observation Results

Teacher observation results. Special education teachers were observed teaching in six of the schools. (If no program was available to observe, observers did not observe in the school.) For schools that had a special education program that could be observed or had some sort of activity taking place in the room designated as the special education classroom, teachers were observed during the hours that that program was in operation. Three classes were entitled "Learning Center," five were entitled "Study Skills," and two were entitled "Special Education." For schools where the teachers were teaching subject-area courses in the special education classroom only, the teachers were observed during those class hours. Three of these classes were

entitled "Special Education English," one was entitled "Resource English," one was entitled "Prealgebra," and one was entitled "IS Math."

Figure 1 shows the observation results with regard to the mean percentage of intervals the special education teachers in each school spent in instructional and noninstructional activities. It also shows the mean percentage of intervals the teachers in each school spent using research-based instructional programs. The percentage of instructional intervals ranged from a low of 37.8% to a high of 72.1%. In most of the schools, the teachers were engaged in instructional activities about half of the time. In only one school (the suburban school where learning strategies were taught) were research-based instructional programs being used and that was for a mean percentage of 20% of the intervals.

Figure 2 shows the percentage of intervals in which the teachers were interacting with students and with other teachers. Teacher-student interactions ranged between 39% and 88% of the intervals, with no clear pattern related to school location. In four of the six schools, teachers were spending about half of their time or less interacting with students. Teacher-teacher interactions took place in less than 11% of the intervals in all of the schools.

Table 12 shows the mean percentage of intervals in which teachers in each school engaged in certain instructional behaviors. With the exception of teachers in two schools (Urban School #2 & Suburban School #2), teachers in most of the schools spent more than half of their time engaged in lecturing to the students or reading aloud to them (most of this time was spent lecturing). Most of the rest of their time was spent giving directions, asking questions, monitoring the students (i.e., circulating among them, watching them as they worked), and listening to students. Few, if any, intervals were spent using research-validated methods such as providing models, having students verbally rehearse information, using advance organizers, simple enhancers, Content Enhancement Routines, and elaborated feedback.

Table 13 shows the mean percentage of intervals in which teachers in each school engaged in certain motivational behaviors. In general, the teachers engaged in few motivational behaviors, with teachers in three of the schools engaging in none at all. The behaviors in which some of the teachers engaged were expressing expectations to students and providing brief forms of positive and negative feedback ("Good job," "Nice idea," "Stop that!").

Table 14 shows the mean percentage of intervals in which the teachers in each school used a particular approach to instruction with the students. In three of the schools, the teachers spent most of their instructional time tutoring the students (helping them with homework or other assignments). In Rural School #2, the teachers spent an average of 25.9% of their time tutoring and 16.7% of their time in remedial instruction. In Suburban School #2, the teachers spent an average of 25.6% of the intervals teaching learning strategies, 13% of the intervals teaching career/vocational skills, and 5% of the intervals on tutoring. In Suburban School #3, with the

exception of 1% of the intervals, which were spent on strategic instruction, the teachers spent all of their time tutoring. In Urban School #1, the teachers focused on remedial instruction (i.e., teaching basic skills), while spending some time on career-vocational instruction and a little time on tutoring. In contrast, in Urban School #2, the teachers spent all their time tutoring. In Urban School #3, the teachers spent about half the time tutoring and 11% of the intervals on remedial instruction. None of the teachers were involved in teaching students functional skills, and none of the teachers were testing students during the observations.

Table 15 shows the mean percentage of intervals in which different kinds of materials were being used in the classes. The types of materials being used were somewhat similar across the schools, although the relative amount of time each type of material was used varied widely. In most of the schools, students were using basic materials (i.e., pencils, paper), textbooks, and worksheets. In only two schools (Rural School #2 & Suburban School #2) were computers being used by students. In the rural school, computers were in use for a mean of less than 1% of the intervals across class periods observed. Suburban school #2 was the only school in which research-based materials were being used for a mean of 5.7% of the intervals per class period.

Table 16 shows the results related to the percentage of intervals in which the students were taking part in different types of instructional arrangements during the times the teachers were observed. In all of the schools, students were spending time working independently; in two of the schools, they spent all their time in independent activities. In four of the schools, there was some time spent in whole-group activities. Only a few intervals were spent in small-group activities in two of the schools, and none of the intervals in any of the schools were spent in paired activities.

Table 17 displays the results for the types of stimuli the teachers had arranged for students. In all of the schools, teachers had arranged some visual, auditory, and kinesthetic stimuli for the students; however, there were different levels of emphasis across the schools. For example, in Rural School #2, students were supposed to be attending to auditory, visual, and kinesthetic stimuli about a third of the time each. In contrast, in Urban School #1, students were supposed to be attending to auditory stimuli 99% of the time, visual stimuli 73% of the time, and kinesthetic stimuli 49% of the time.

Student observation results. Students were observed in the same six schools in which teachers were observed during the same class periods as the teachers. Figure 3 shows the observation results with regard to the mean percentage of intervals the students in each school spent in instructional and noninstructional activities. It also shows the mean percentage of intervals they spent involved in research-based instructional programs. With the exception of one school (Suburban School #3), the percentage of instructional intervals for students closely mirrors the percentage of instructional intervals for teachers. That is, the more teachers were

engaged in instructing, the more students were engaged in instructional activities. (Compare Figure 3 to Figure 2.) The percentage of instructional intervals for students ranged from a low of 38.9% to a high of 90.6%. In most of the schools, the students were engaged in instructional activities more than half of the time. In only Suburban School #2 were the students engaged in research-based instructional programs as they were being observed, and that was for an average of 18.7% of the intervals per class period.

Figure 4 shows the percentage of intervals in which the students were interacting with a teacher and with other students. Student-teacher interactions ranged between 0% and 34% of the intervals. Student-student interactions took place in less than 21% of the intervals in all of the schools; in three of the schools, there were no or close to no student-student interactions.

Table 18 shows the mean percentage of intervals in which students in each school engaged in certain academic responses during the time they were engaged in instructional activities. Most of the students' instructional time across all the schools was spent either reading or writing. Students in three of the schools spent a large portion of time listening. Students in Rural School #2 and Suburban School #2 spent a large portion of time transitioning between activities.

Table 19 shows the mean percentage of intervals in which the students in each school were engaged in a particular approach to instruction. Students in four of the schools spent some time in a tutorial approach, with students in two of these schools (Urban School #2 and Suburban School #3) spending the large majority of their instructional time in this approach. Students in three of the schools received some remedial instruction, with students in one school (Urban School #1) spending close to half of their time learning basic skills. Students in only one school (Suburban School #2) were engaged in strategic and career-vocational instruction. Students in one school (Rural School #2) spent a few intervals learning functional skills. None of the students were taking tests during the observations.

Table 20 shows the mean percentage of intervals in which different kinds of materials were being used by the students. The amount of time that students spent using various materials varied widely across the schools. In all of the schools, students were using basic materials (i.e., pencils, paper) some of the time. In five of the six schools, students were using textbooks and worksheets some of the time. In three of the schools, students were using computers. In only one school (Suburban School #2) were research-based materials being used for a mean of 11% of the intervals.

Table 21 shows the results related to the percentage of intervals in which the students were supposed to be taking part in different types of instructional arrangements. In all of the schools, students were supposed to be spending some of their time working independently at least some of the time. In five of the six schools, they were to be spending half or more of their

time doing independent work. In three of the schools, the students spent a large portion of their time in whole-group activities. Only a few intervals were spent in small-group activities in two of the schools, and none of the intervals were spent in paired activities in any of the schools.

Table 22 displays the results for the types of stimuli the teachers had arranged for students during the intervals in which the students were being observed. Teachers had arranged some visual, auditory, and kinesthetic stimuli for the students in all of the schools with varying levels of use across the schools. For example, in Urban School #2, very few intervals (8.8%) involved the use of auditory stimuli, and the large majority of intervals involved the use of visual and kinesthetic stimuli. In contrast, in Urban Schools #1 and 3, most of the intervals (83%) involved the use of auditory stimuli.

Classroom results. Table 23 shows the mean percentage of "Yes" responses recorded by observers as they filled out the Classroom Climate Checklist for special education classrooms in each school in which teachers and students were observed. The results show that the classrooms were different with regard to all aspects of climate. All of the suburban and rural classrooms were neatly arranged and devoid of litter. Only one urban classroom had any evidence of a school-wide discipline program. With the exception of classrooms in Urban School #2, all of the classrooms had motivational posters. A few of the classrooms had instructional posters. All of the rural classrooms were connected to the larger community of the school in some way.

Table 24 displays the results from the observers' descriptions of the classes that were observed. Scorers read the observers' descriptions for each item on the Class Description Form and rated the descriptions as a "3" for "positive," "2" for "neutral," and "1" for "negative." Mean ratings varied widely across the teachers' classes, with some classes receiving a low mean ratings of 1.3, and others receiving ratings as high as 2.8.

Special Education Teacher Satisfaction Results

Figure 5 summarizes the results derived from the Special Education Teacher Satisfaction Questionnaire according to type of school (urban, rural, suburban). It shows the mean ratings provided by the teachers across items within each of the six sections of the questionnaire. Overall, the satisfaction expressed by the teachers was relatively low. The teachers in the rural schools expressed the most satisfaction, with all but one of their mean ratings at the 5.0 level or above; however, only one of their mean ratings reached the satisfied ("6") level. Many of the mean ratings for teachers in the suburban and urban schools were within the "4" range. Overall, the teachers were least satisfied with the professional development experiences that they had had to help them ensure students' success in required general education classes, closely followed by their disgruntlement with the outcomes students with disabilities were achieving in general education courses.

Figures 6, 7, and 8 show the summary results for teachers in each of the suburban, rural, and urban schools, respectively. These figures show that the satisfaction of the teachers varied widely within each type of school. For example, within the suburban schools (Figure 6), teachers in two of the schools provided ratings indicating satisfaction in many of the sections, while teachers in one of the schools provided very low ratings. Nevertheless, the teachers in the two suburban schools who were relatively satisfied overall provided mean ratings that were not in the satisfied range with regard to the outcomes being achieved by students and their own performance related to ensuring the success of students in general education classes. Although teachers in two of the rural schools (Figure 7) provided some ratings that were close to the satisfied level, teachers in one of the rural schools submitted much lower ratings. The ratings of teachers in the urban schools were the most homogenous (see Figure 8), with only one mean rating reaching the satisfied ("6") level.

Discussion

The purpose of this investigation was to sample the beliefs and reports of special education teachers in nine high schools and to relate their reports to observations of the programs that are in operation in those high schools to enhance the success of SWDs in the general education curriculum. The teachers indicated that they believed their most important role was to teach learning strategies to the students and to work with their general education teachers. They believed the students' greatest needs with regard to succeeding in general education classes were learning strategy instruction and homework assistance. When asked how they spend their time, they reported that they spend some time teaching learning strategies, and their estimated time in this activity ranged from about 15% to 90% of the time they spend on academic activities (which is about a third of their time). When calculated out, this comes to about 2 to 14 hours per week, based on a 40-hour work week. They also reported that they spend time teaching subject-area classes, providing remedial instruction, and helping students with homework and preparing for tests. The percentages of time that they estimated that they spent in these different activities varied considerably across schools.

The reason for this variation becomes clear after reviewing the observational data. Each of the schools serves SWDs in very different ways. Only one of the schools, Suburban School #2, has a program which the teachers have labeled a "learning strategies program" and in which learning strategies are taught. This same school is the only school in which SWDs are enrolled in rigorous general education courses and in which students are not enrolled in low-track or adapted courses (with the exception of one adapted algebra course) or in subject-area courses taught by special education teachers. In only one other school, are the majority of SWDs enrolled in rigorous courses. In five of the schools, the large majority of SWDs are enrolled in subject-area courses taught by special educators. Three of the schools enroll the majority of SWDs in low-

track or adapted courses (e.g., the algebra course in one school spans two years instead of two semesters). Thus, teachers in these different schools engage in different activities. If they work in a school in which learning strategies are taught, they spend time working with small groups of students or with one student teaching learning strategies. If they work in a school where SWDs are taught required subject-area classes in the special education classroom, they teach subject-area classes. If they work in a school in which SWDs are enrolled in low-track courses which are team taught, they assist general education teachers in their classrooms.

What is startling about the results is that most of the schools did not seem to have a clear plan for giving SWDs real access to rigorous general education courses and for supporting their success in those courses. Three of the schools had no special education program with this designated purpose. A fourth school had a room, which the observers reported to be the size of a janitor's closet, to which students could report during certain posted hours if they needed homework assistance. Two more schools had resource room programs in which students could receive instruction in basic skills. Only three of the schools had operating resource room programs to which SWDs reported daily for a variety of support activities like some sort of instruction and/or homework assistance. Only one resource room provided formal instruction in learning strategies.

The observational data revealed that the programs varied widely with regard to the amount of time students and teachers were actually engaged in instructional activities and interacted with each other. However, they did not vary widely with regard to whether research-based programs and materials were being used. Only one program, the learning strategies program in Suburban School #2 was utilizing research-based instructional programs and materials. Additionally, very few instructional methods and motivational methods that have been validated for enhancing the performance of SWDs were being used by the teachers. During instructional intervals, teachers spent most of their time lecturing or reading to the students, watching them as they worked, giving them directions, and asking questions. The instructional approach used the most was tutoring followed by remedial instruction. In only one program was learning strategy instruction observed, and this was for only 26% of the teacher intervals observed and 17% of the student intervals observed.

Not surprisingly, the teachers' satisfaction ratings indicated that they were not satisfied with the outcomes that they are producing with regard to supporting students' success in rigorous general education courses. They also reported that they are not satisfied with the professional development experiences that they have had in this area.

These results collaborate and extend the findings reported by Kea (1987) and Kline et al. (1992). Like Kea's findings, these findings show that special education teachers tend not to engage in critical teaching behaviors supported in the literature. Like Kline et al.'s findings,

these findings indicate that relatively low amounts of time on task might be taking place in special education programs and that even when a program is labeled a "learning strategies program" the majority of teacher and student time may not be spent on strategy instruction. However, the present findings also extend this earlier work by showing that the majority of schools participating in the study are not giving students true access to the general education curriculum and do not have the kinds of comprehensive programs in place that are required to support students in the general education curriculum (e.g., Deshler & Schumaker, 1999; Hock, Schumaker, & Deshler, 1999). Although in most of the schools, the teachers were genuinely concerned about the students' welfare and success, services in many of the schools seemed to be "catch as catch can" affairs with little coordination and few plans or policies in place.

These results must be tempered, of course, by the number of schools and teachers involved in the study. Additionally, schools in only four states were included, and some states may have more unified types of programs in place.

In conclusion, the results of the present study are cause for concern within the framework of IDEA and the goals related to improving the performance of students with disabilities and ensuring them real access to the general education curriculum. The educators participating in this study did not seem to be embracing these goals. Instead, the large majority of SWDs in the majority of participating schools were enrolled in low-track or special-educator-taught subject-area courses and were not expected to meet the demands that other students in the schools were expected to meet. Additionally, programs were not in place to provide them with the complex sets of skills and strategies that they need in order to be successful in general education courses. In the one school in which some research-based programs were being used, students, for the most part, were enrolled in rigorous courses and expected to meet the same demands as other students. According to the teachers and SWDs in this school, the students were successfully meeting demands.

The results of the present study point to the need for a national effort to put in place comprehensive programs for students with disabilities in high schools and to provide appropriate preservice and inservice training experiences for teachers who can operate these programs. Research has shown that the instruction of secondary students with disabilities need no longer be a matter of opinion or a "catch as catch can" affair. Instead, what are needed are comprehensive programs that provide students the instruction and support required for them to be successfully be engaged in the general education curriculum.

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Table 1

"Top three" rankings by special education teachers related to what they consider to be their main roles in supporting the success of students with disabilities enrolled in general education courses for academic purposes

	All teachers		Urban teachers		Suburban teachers		Rural teachers	
Answer	Percent[1]	Weighted score[2]	Percent	Weighted score	Percent	Weighted score	Percent	Weighted score
Supporting homework completion.	11.1	16	10	7	6.7	3	16.7	6
Teaching learning strategies.	22.2	33	16.7	9	33.3	14	22.2	10
Teaching prerequisite skills and knowledge.	15.9	20	23.3	15	6.7	1	11.1	4
Providing remedial instruction.	12.7	16	13.3	9	6.7	2	16.7	5
Preparing them for tests.	9.5	7	3.3	1	13.3	2	16.7	4
Co-teaching with the teachers of those courses.	0	0	0	0	0	0	0	0
Teaching some of those courses yourself.	3.2	6	6.7	6	0	0	0	0
Consulting with teacher of general education courses.	20.6	23	23.3	12	26.7	6	11.1	5
Other.	4.8	5	3.3	1	6.7	2	5.6	2

[1] The percentage score represents the percentage of time an item was ranked in the top three rankings by teachers.
[2]The weighted score represents the score derived by giving every top ranking 3 points, every second ranking 2 points, and every third ranking one point and summing the points for the teachers in each group.

Table 2

"Top three" rankings of special education teachers related to the kinds of support they believe students with disabilities who are enrolled in general education classes for academic purposes need most in order to succeed at the "C" level or above

	All teachers		Urban teachers		Suburban teachers		Rural teachers	
Answer	Percent[1]	Weighted score[2]	Percent	Weighted score	Percent	Weighted score	Percent	Weighted score
Supporting homework completion.	15.2	18	10	6	16.7	5	22.2	7
Teaching learning strategies.	25.8	43	23.3	15	33.3	16	22.2	12
Teaching prerequisite skills and knowledge.	13.6	18	20	11	0	0	16.7	7
Providing remedial instruction.	6.1	7	6.7	4	5.6	2	5.6	1
Preparing them for tests.	7.6	7	6.7	3	0	0	16.7	4
Co-teaching with the teachers of those courses.	1.5	1	0	0	5.6	1	0	0
Teaching some of those courses yourself.	1.5	3	3.3	3	0	0	0	0
Consulting with teacher of general education courses.	24.2	29	23.3	14	33.3	10	16.7	5
Other.	4.5	6	6.7	4	5.6	2	0	0

[1]The percentage score represents the percentage of time an item was ranked in the top three rankings by teachers.

[2]The weighted score represents the score derived by giving every top ranking 3 points, every second ranking 2 points, and every third ranking one point and summing the points for the teachers in each group.

Table 3

"Top three" rankings of special education teachers related to reasons for enrolling students with disabilities in certain general education courses for academic credit

	All teachers		Urban teachers		Suburban teachers		Rural teachers	
		Weighted		Weighted		Weighted		Weighted
Answer	Percent[1]	score[2]	Percent	score	Percent	score	Percent	score
The teacher's personality.	11.1	14	6.7	3	16.6	6	13.3	5
Availability of teacher to plan with me.	3.2	2	6.7	2	0	0	0	0
Instructional methods the teacher uses.	20.6	21	16.7	7	22.2	7	26.7	7
Teacher's attitude about having SWDs in class.	27	41	30	23	27.8	12	20	6
The success SWDs have had in the class in the past.	19	21	23.3	12	11.1	4	20	5
The accommodations the teacher uses.	14.3	18	13.3	10	16.6	4	13.3	4
The student's schedule.	1.6	3	0	0	0	0	6.7	3
The scheduling staff member's requirements.	0	0	0	0	0	0	0	0
School policy on enrollment.	0	0	0	0	0	0	0	0
Other.	3.2	6	3.3	3	5.5	3	0	0

[1]The percentage score represents the percentage of time an item was ranked in the top three rankings by teachers.

[2]The weighted score represents the score derived by giving every top ranking 3 points, every second ranking 2 points, and every third ranking one point and summing the points for the teachers in each group.

Table 4

Mean percentages of time spent in various activities estimated by special education teachers

	All Schools	Rural Schools				Suburban Schools			Urban Schools			
Activity		1	2	3	Total	1	2	Total	1	2	3	Total
Addressing academic needs of students	37.8	17.5	35	40	30	32.5	66.7	47.1	33.8	30	48.3	35.8
Addressing social, behavioral, or transition needs of students	31.6	40	25	30	31.7	38.8	15	28.6	27.5	44	23.3	33.3
Dealing with paperwork or other administrative requirements	30.2	42.5	40	30	37.5	26.3	18.33	22.9	38.8	26	28.3	30.8

Table 5

Mean percentages of time special education teachers spend in activities related to addressing students' academic needs

	All Schools	Rural Schools				Suburban Schools			Urban Schools			
Activity		1	2	3	Total	1	2	Total	1	2	3	Total
Teaching students learning strategies	26.2	10	17.5	27.5	18.3	30	90	66	16.3	13	11	13.6
Helping students with homework	18.6	30	22.5	15	22.5	20	0	20	8.3	15	25	16
Teaching subject matter courses	25.3	45	30	15	30	15	10	13.8	32.5	22	30	27.3
Preparing students to meet state standards	10	10	10	10	10	12.5	0	12.5	11.7	7.5	10	9.5
Preparing students for tests in their gen ed classes	13.5	10	22.5	15	17	15	10	12.5	5	11.7	16.7	11.9
Providing remedial instruction in basic skills	27.9	10	17.5	17.5	16	33.3	0	33.3	33.8	38	17.3	31.4

Table 6

Mean percentages of time teachers spend in activities that address social, behavioral, or transtition needs of students

	All Schools	Rural Schools				Suburban Schools			Urban Schools			
Activity		1	2	3	Total	1	2	Total	1	2	3	Total
Dealing with behavior management and/or discipline problems	27	17.5	27.5	32.5	25.8	30	11.7	22.1	22.5	34	35	30.4
Developing transition plans, setting up and attending transition meetings	29	25	25	35	29	30	43.3	35.7	33.8	25	13.3	25
Counseling students on personal problems	24	52.5	20	12.5	28.3	18.8	5	14.2	25	25	31.7	26.7
Supporting general education teachers with regard to problems and accommodations	22.2	17.5	27.5	20	21.7	21.3	41.7	30	18.8	16	20	17.9

Table 7

Mean percentages of time special education teachers spend in activities that deal with paperwork or other administrative requirements

	All Schools	Rural Schools				Suburban Schools			Urban Schools			
Activity		1	2	3	Total	1	2	Total	1	2	3	Total
Developing IEPs, setting up and attending IEP meetings	47.2	37.5	32.5	35	35	57.5	46.7	52.9	50	53	45	50
Doing required paperwork related to IDEA '97	15.2	17.5	22.5	22.5	20.8	15	12.5	14	6.7	13.8	16.7	12.5
Collecting assessment information	12.2	12.5	15	12.5	13.3	6	5	5.8	15	12	15	13.8
Evaluating the outcomes of your work	11	7.5	15	10	10.8	5.7	15	9.4	12.5	12.5	10	11.8
Communicating with parents	19.2	25	15	20	20	22.5	33.3	27.1	15	14	13.3	14.2

Table 8

Mean number of hours per week special education teachers reported spending on activities with general education teachers

	All Schools	Rural Schools				Suburban Schools			Urban Schools			
Activity		1	2	3	Total	1	2	Total	1	2	3	Total
Counseling with general education teachers on problems and accommodations	3	15	10	0	8.3	4.4	2.7	3.8	1.6	2.3	5.7	3.1
Teaching in general education classrooms	1.5	0	0	0	0	4.1	0	2.6	2.3	0	0.5	1.1
Planning instruction with general education teachers	2	15	5	0	6.7	2.2	0.5	1.6	0.6	0.5	2	1

Table 9
Services available to students with disabilities

	Rural Schools			Suburban Schools			Urban Schools		
Service	1	2	3	1	2	3	1	2	3
Services targeted to SWDs in general education classes		X	X	X	X	X			
Special Education Classroom	X	X	X	X	X	X		X	X
Type A Classes (SPED taught for Gen. Ed.)	X	X	X	X		X	X	X	X
Study Halls	X	X			X	X			X
Learning Strategy instruction					X				
Co-teaching (SPED and Gen. Ed.)			X	X		X			X
Tutoring (outside Resourse Room)	X	X			X				X
Counseling	X	X	X	X	X	X	X		X
Number of Educational	2	3	4	5	4	5	7	4	1

Table 10

Special education services provided in each school as reported by special education administrators

Schools	Special Ed. Classroom/ Resource Room		Self-Contained Classes		Monitored
	Number of students	Hours served daily	Number of students	Hours served daily	Number of students
1R	67	1 to 3	4	1 to 3	2
2R	25	1 to 3	0	0	1
3R	59	1 to 3	27	3 to 7	0
1S	65	.5 to 7	6	1 to 7	11
2S	93	1 to 4	11	7	73 [1]
3S	64	1 to 4	0	0	4
1U	72	1 to 3	3	3 to 7	17
2U	182	N/A	0	N/A	0
3U	144	1 to 3	72	4 to 7	14

[1] Most of the monitored students at this school are gifted.

Table 11

Number of students receiving each type of service by type of school as reported by special education administrators

	Students in Special Ed. Classroom/ Resource Room	Students in Self-Contained Classes	Monitored Students	Totals
Rural	151	31	3	185
Suburban	222	17	88	327
Urban	398	75	31	504
Total	771	123	122	1016

Table 12

Mean percentage of intervals in which teachers in each school engaged in certain instructional behaviors

	Rural School	Suburban Schools		Urban Schools			Total
Behavior	2	2	3	1	2	3	
Lecture/read	71.3	6.1	54.8	59.3	37.9	64.9	49.1
Give directions	22.1	20.4	2.5	14.8	13.1	8.6	13.5
Listening	0.9	24.8	4.9	0	1	15.2	8.7
Ask question	1.4	23.7	19.1	3.7	25.5	12.2	14.2
Monitor	5.6	39.1	18.7	18.5	53.2	21.8	24.9
Model	0	0	0	0	5	0	0.6
Verbal rehearsal	0	0	0	0	0	0	0
Simple enhancer	0	2	0	0	0	0	0.4
Advance organizer	0	0	0	0	0	0	0
Role play	0	0	0	0	0	0	0
Content enhancement	0	0	0	0	0	0	0
Elaborated feedback	0	0	13.3	0	0	0	2.5
Write on board	0	0	0	0	0	6.7	1.3
Describe skill/seq.	0	0	0	0	1.5	0	0.2

Table 13

Mean percentage of intervals in which teachers in each school engaged in certain motivational behaviors

	Rural School	Suburban Schools		Urban Schools			Total
Behavior	2	2	3	1	2	3	
Expectation	5.6	0	0	0	11.6	0	2.5
Brief positive feedback	4.2	0	1.2	0	2.5	0	1.3
Brief negative feedback	1.4	0	0	0	8.5	0	1.3
Reward	0	0	0	0	0	0	0
Punishment	0	0	0	0	0	0	0
Give rationales	0	0	0	0	0	0	0
Counseling	0	0	0	0	0	0	0
Write contract	0	0	0	0	0	0	0

Table 14

Mean percentage of intervals in which teachers in each school engaged in particular approaches to instruction

	Rural School	Suburban Schools		Urban Schools			Total
Approach	2	2	3	1	2	3	
Tutoring	25.9	5.2	36.2	9.4	69.2	52.1	32.2
Remedial	16.7	0	0	37.5	0	11.1	9.9
Strategic	0	25.6	1.2	0	0	0	5
Career-vocational	0	13.6	0	18.8	0	0	4.9
Functional	0	0	0	0	0	0	0
Testing	0	0	0	0	0	0	0

Table 15
Mean percentage of intervals in which different kinds of materials were being used in the classes

	Rural School	Suburban Schools		Urban Schools			Total
Material	2	2	3	1	2	3	
Visual aid	24.5	0	1.2	27.8	16.7	2.8	10.9
Textbook	6.3	0	13.9	5.2	65.8	87.5	29.1
Worksheet/ workbook	30.3	43.3	14.6	11.1	0	6.3	19.1
Basic materials	17.1	66.2	33.1	19.1	65.8	20.1	36.2
Teacher-made	24.5	0	6.3	13.9	0	0	7.5
Published controlled	0	0	0	0	0	0	0
Activities	0	0	1.2	0	0	0	0.2
Audio-visual	0	14.6	0	14.6	31.8	0	8.5
Periodical	0	0	0	0	0	0	0
Computer	0.5	36.8	0	0	0	0	7
Misc.	0	0	3.3	33.3	0	9	6.5
Research-based	0	5.7	0	0	0	0	1.1

Table 16

Mean percentage of intervals in which the students were taking part in different types of instructional arrangements

	Rural School	Suburban Schools		Urban Schools			Total
Arrangemnt	2	2	3	1	2	3	
Entire group	33.8	0	0	50	12.7	65.3	26.4
Pairs	0	0	0	0	0	0	0
Small group	1.4	0	0	0	0	8.3	1.8
Individual	66.2	100	100	52.8	87.3	25	72.1

Table 17

Mean percentage of intervals in which various types of stimuli had been arranged by the teachers

	Rural School	Suburban Schools		Urban Schools			Total
Modality	2	2	3	1	2	3	
Visual	39.1	69.6	36	72.6	69.2	97.2	63.1
Auditory	35.6	51	28.3	99	66.4	81.9	57.6
Kinesthetic	33.6	47.3	28.1	49	71.1	65.3	47.7

Table 18

Mean percentage of intervals in which students in each school responded during instructional intervals

	Rural School	Suburban Schools		Urban Schools			Total
Reponse	2	2	3	1	2	3	
Listening	19.9	7.4	2.8	50	7.5	28.9	17.6
Reading	53.1	26.6	28.4	23.1	38.5	31.9	34.2
Writing	39.7	34	19.9	21.2	79.1	33.2	38.8
Ask question	7.5	5.6	8.7	7.7	1.3	2.1	5.3
Answer question	2.2	1.3	10.4	0	1.8	8.1	4.2
Academic game	0	0	0	0	0	0	0
Academic talk	10.8	15.4	1.4	0	0.6	0	5
Practice	0	0	36.9	0	18.9	0	9.8
Transition	37.3	22	2.8	3.8	0	0	11.4

Table 19

Mean percentage of intervals in which the students in each school were engaged in particular approaches to instruction

	Rural School	Suburban Schools		Urban Schools			Total
Approach	2	2	3	1	2	3	
Tutoring	27.1	6.5	70.2	36.1	85.1	66.3	49.3
Remedial	10.9	0	0	43.8	5.6	0	8
Strategic	0	16.7	0	0	0	0	2.9
Career-vocational	0	36.1	0	0	0	0	6.4
Functional	0.9	0	0	0	0	0	0.2
Testing	0	0	0	0	0	0	0

Table 20
Mean percentage of intervals in which different kinds of materials were being used in the classes

	Rural School	Suburban Schools		Urban Schools			Total
Material	2	2	3	1	2	3	
Visual aid	13.8	0	0	28.5	11.1	0	7.7
Textbook	11.5	0	28.6	27.8	77.9	64.9	35.5
Worksheet/ workbook	21	38.9	32.7	0	26.7	0.8	21.2
Basic materials	15.4	55.6	34.7	46.5	90.6	28.2	45.1
Teacher-made	13.8	0	20.8	18.8	0	0	8.3
Published controlled	0	2.8	0	0	0	0	0.5
Activities	0	0	0	0	0	0	0
Audio-visual	0	0	0	9.7	13.9	0	3.6
Periodical	0	0	0	0	0	0	0
Computer	3.2	15.7	8.3	0	0	0	4.8
Misc.	1.1	0	31.9	0	0	22.8	9.9
Research-based	0	11.1	0	0	0	0	2

Table 21

Mean percentage of intervals in which the students were taking part in different types of instructional arrangements

	Rural School	Suburban Schools		Urban Schools			Total
Arrangemnt	2	2	3	1	2	3	
Entire group	37	5.6	0	50	1.1	66.7	25.4
Pairs	0	0	0	0	0	0	0
Small group	1.9	0	0	0	0	10.6	2.2
Individual	63	94.4	100	50	98.9	22.8	72.8

Table 22

Mean percentage of intervals in which various types of stimuli had been arranged by the teachers

	Rural School	Suburban Schools		Urban Schools			Total
Modality	2	2	3	1	2	3	
Visual	41.9	66.7	64.7	70.8	77.3	95.9	69.5
Auditory	18.7	40.7	26.2	83.3	8.8	83.2	41.2
Kinesthetic	26	46.3	44	34.7	78.5	65.9	50.1

Table 23
Mean percentages of "Yes" responses recorded by observers on classroom checklist

	Rural	Suburban		Urban Schools			All
	2R N*=3	2S N=3	3S N=3	1U N=2	2U N=3	3U N=3	
Is there evidence of a school-wide discipline program?	0	0	0	0	0	33.3	4.7
Is the classroom neatly arranged?	100	100	100	50	100	100	78.6
Is the classroom devoid of litter?	100	100	100	100	66.6	100	80.9
Are there structures in place for handing in student products?	66.6	100	0	100	100	100	66.7
Are there motivational posters in the room?	100	100	100	100	0	100	85.7
Are there instructional posters in the room?	66.6	100	33.3	100	66.6	33.3	71.4
Is there something in the room that connects the classroom to the larger school?	100	100	33.3	100	66.6	100	85.7
Does the room represent the teacher's personal touch?	33.3	100	0	100	0	66.6	42.8
Are there visual displays of student academic work?	66.6	0	100	50	0	100	59.5
Total Mean	70.3	77.8	51.8	77.8	44.4	81.5	64

*N= The number of classrooms involved.

Table 24

Ratings given to observers' descriptions of classes being held in the special education classroom

	Rural School			Suburban Schools						Urban Schools						
	2r			2s			3s			1u		2u			3u	
	IS Math	Study Skills	Study Skills	LC	Support/ LC	LC	Study Skills	Study Skills	Study Skills	SPED	SPED	English- SPED	English- SPED	Pre-Algebra	English- SPED	Resource English
Teacher-created atmosphere	2	2	3	3	2	3	2	3	2	1	2	3	3	3	3	3
Student Attitude	2	2	3	3	2	3	1	2	3	3	3	2	3	2	3	3
Teacher-Student Rapport	2	3	2	3	2	3	1	3	3	3	3	2	3	3	3	3
Student-Student Rapport	3	2	2	0	2	2	1	0	0	0	0	0	0	0	0	0
Class Demeanor	1	2	3	3	2	3	2	2	3	2	2	3	3	3	2	3
Class Outcome	3	2	2	3	1	3	1	3	2	2	1	3	3	3	3	3
Class Mean	2.2	2.2	2.5	2.5	1.8	2.8	1.3	2.2	2.2	1.8	1.8	2.2	2.5	2.3	2.3	2.5

Numbers reflect observer's impression based on a three-point scale. A "1" reflects a negative impression of the item, a "2" reflects a neutral impression, and a "3" reflects a positive impression. A "0" reflects no interaction with other students.

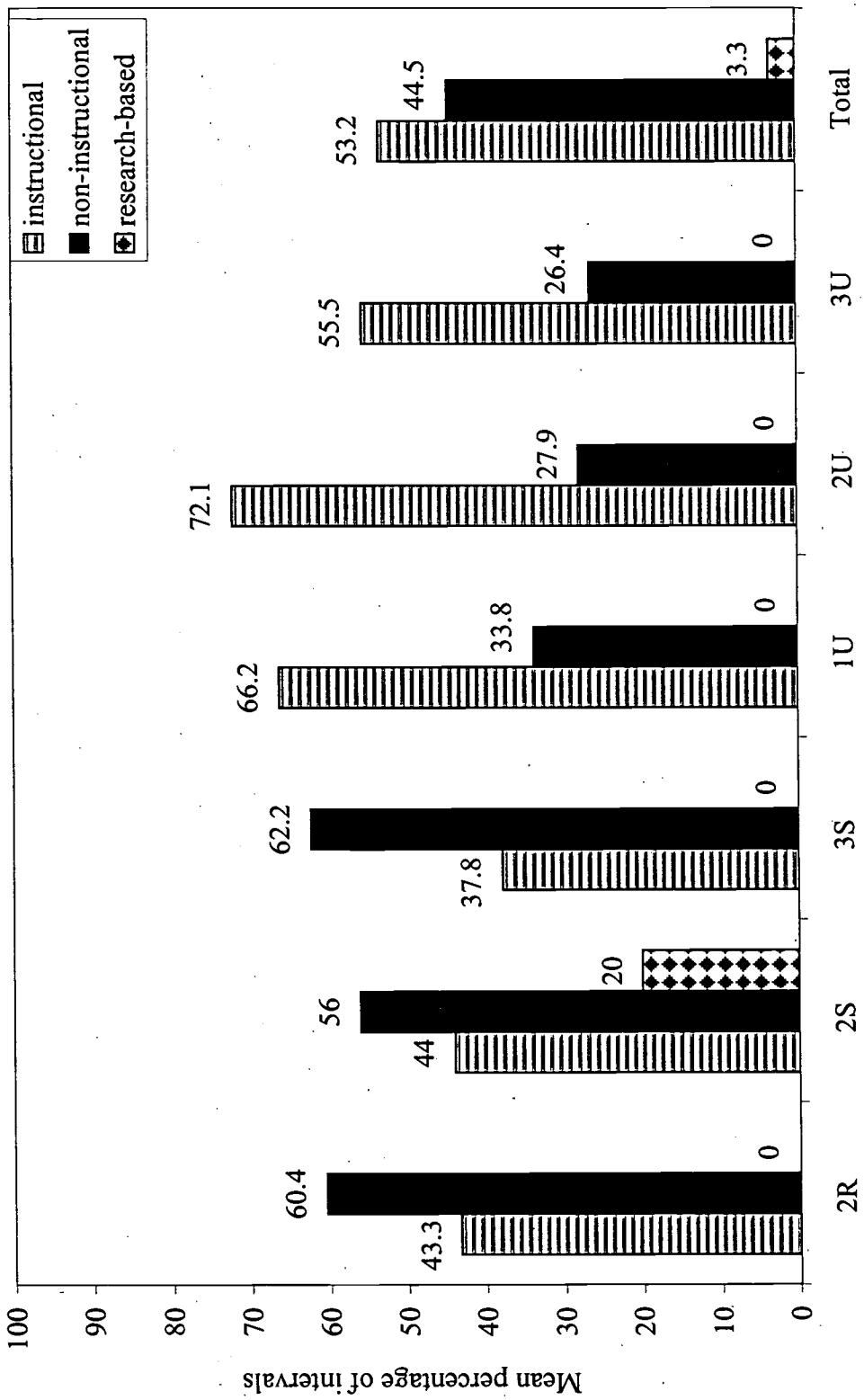


Figure 1. Mean percentage of intervals special education teachers were observed in various activities for each school.

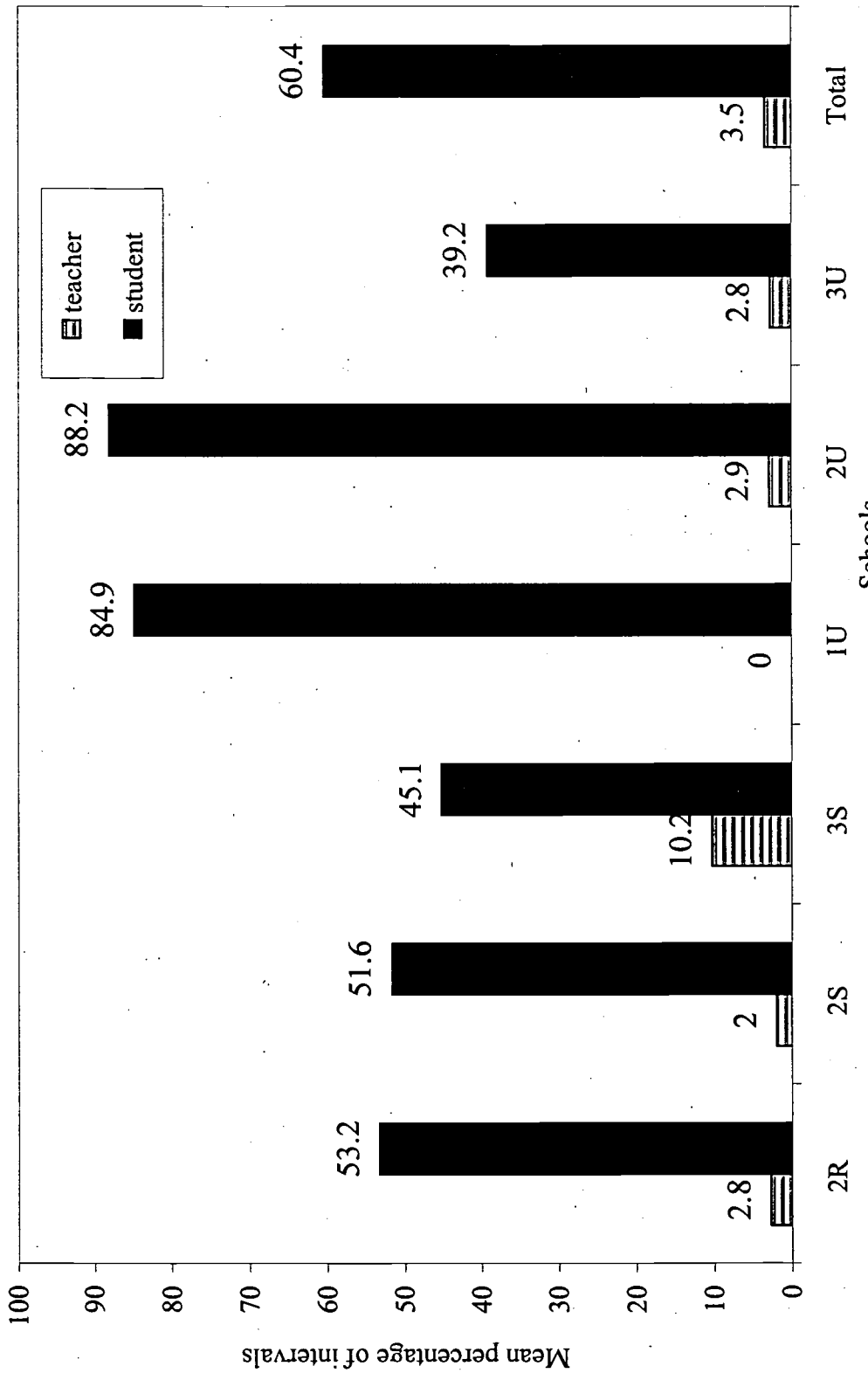


Figure 2. Mean percentage of intervals special education teachers were observed interacting with students and other teachers.

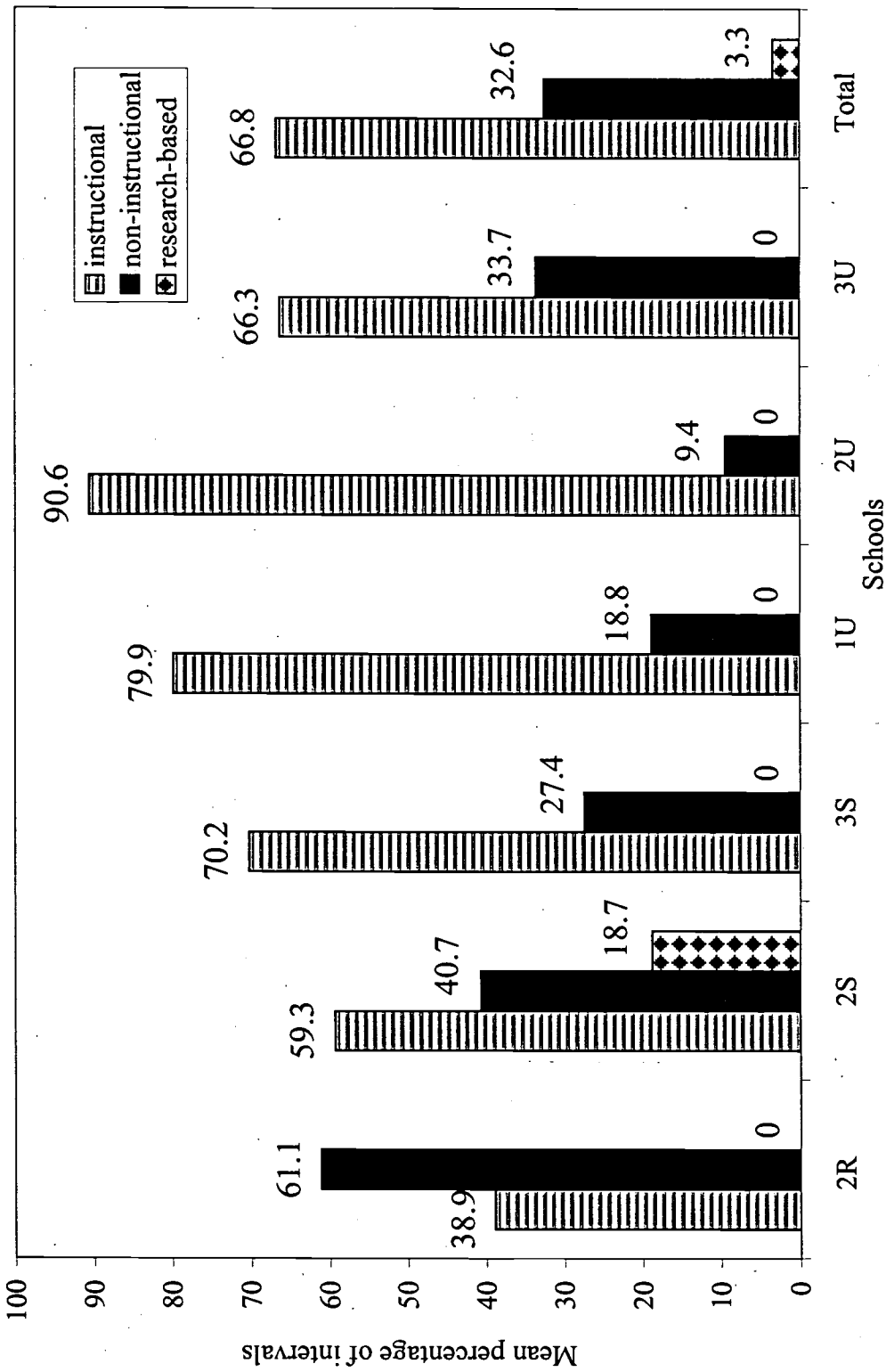


Figure 3. Mean percentage of intervals students spent in certain types of activities.

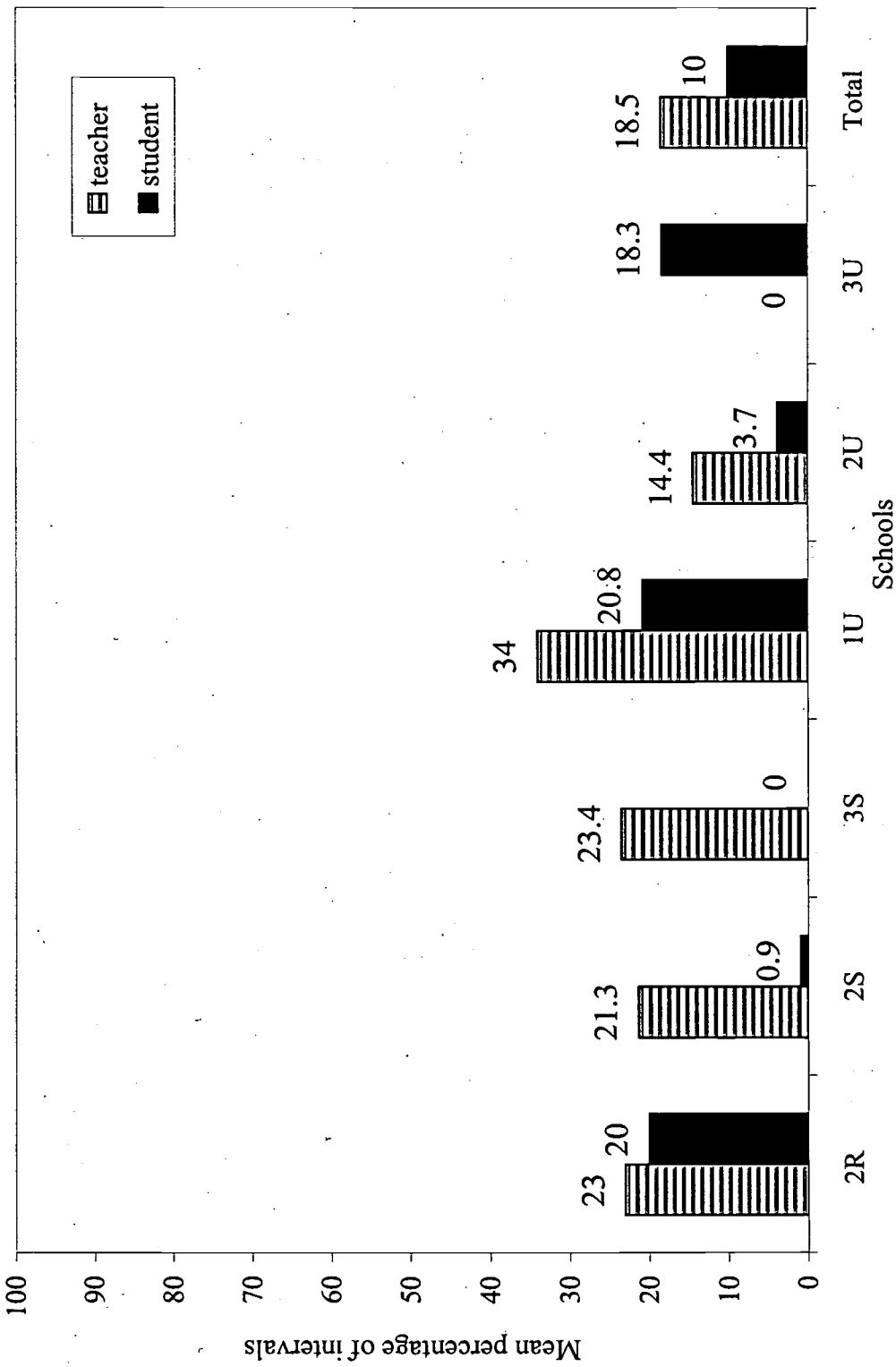
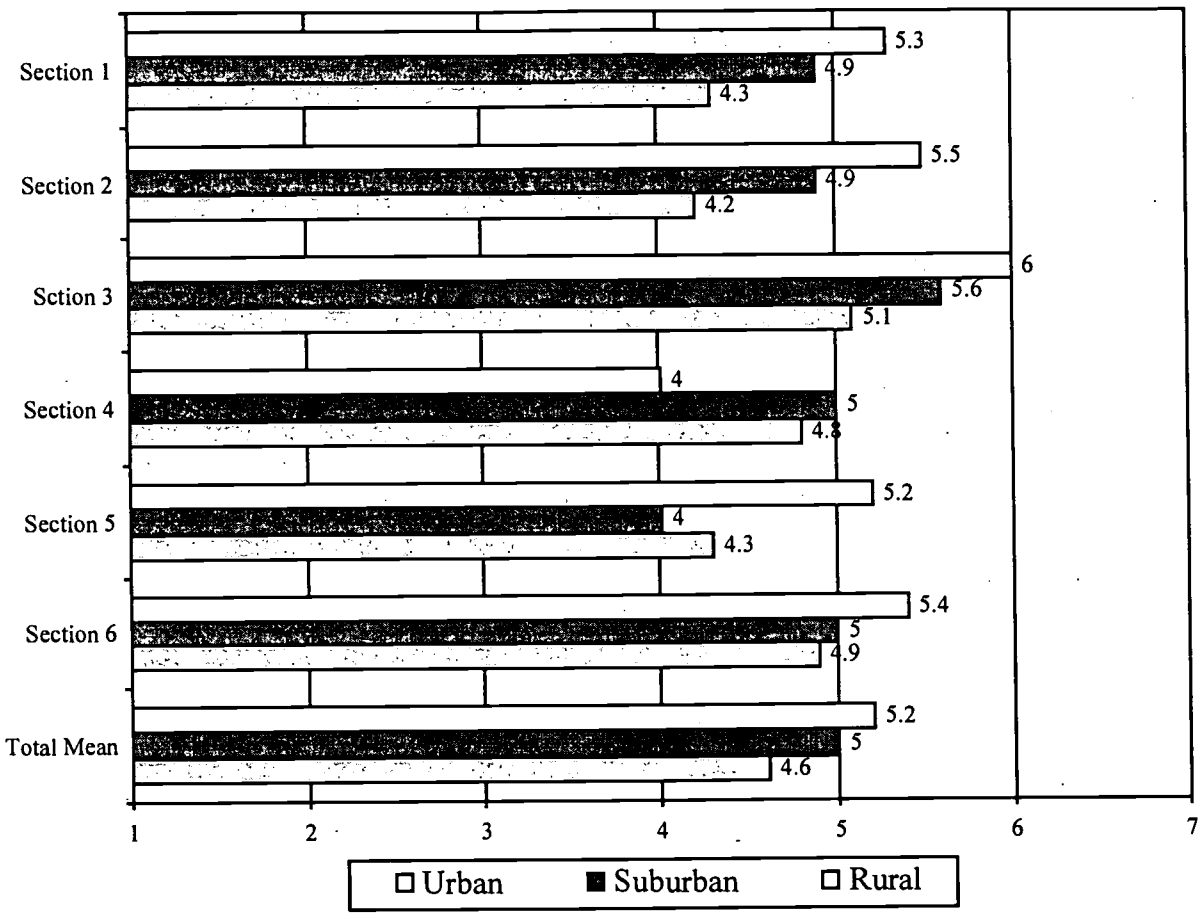


Figure 4. Mean percentage of intervals in which the students were interacting with a teacher and with other students.



Special Education Teacher Satisfaction Questions

Section 1: Consider how the general education teachers who teach required courses in this school work with you.

Section 2: Consider the instruction provided by general education teachers to students with disabilities enrolled in their required general education classes.

Section 3: Consider the written reports you have received and/or personal contacts you have had with general education teachers regarding the progress of students with disabilities enrolled in their classes.

Section 4: Consider the outcomes related to students with disabilities who are enrolled in general education classes for academic purposes.

Section 5: Consider the professional development experiences provided to you to assist you in helping these students succeed in required general education classes.

Section 6: Consider your own performance as a teacher with regard to ensuring the success (earned grades of C or above) of students with disabilities in general education classes.

Figure 5. Mean satisfaction ratings reported by special education teachers for all demographic regions.

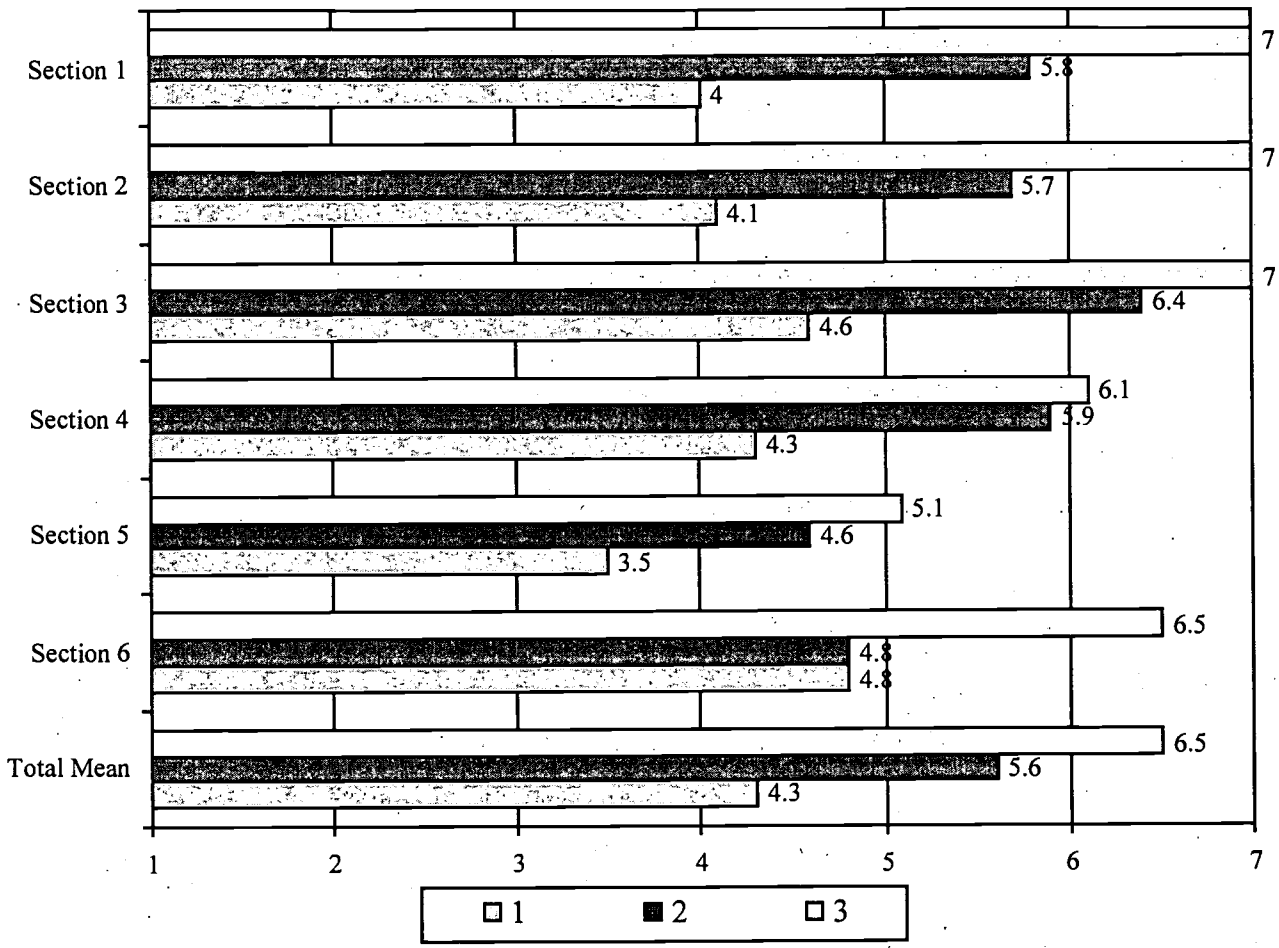


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Figure 6. Mean satisfaction ratings by special education teachers for suburban schools.

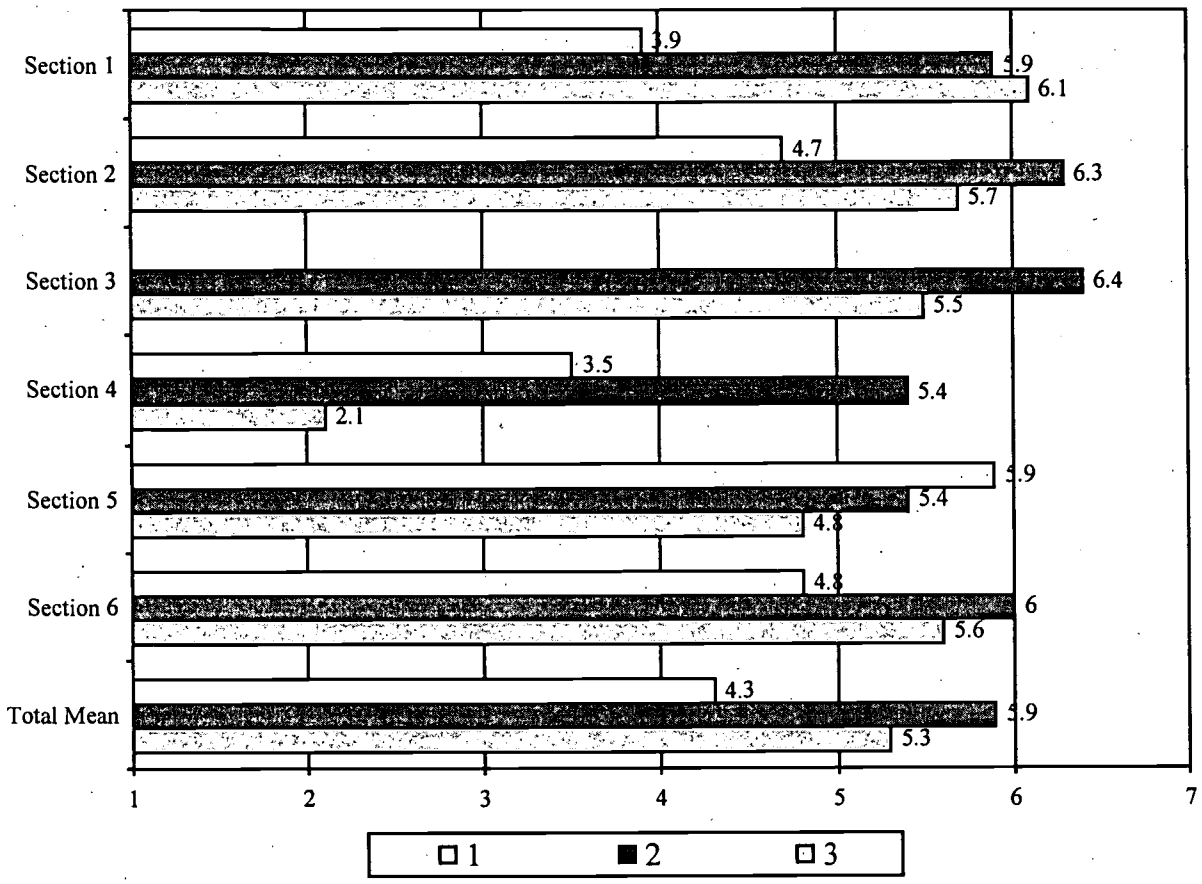

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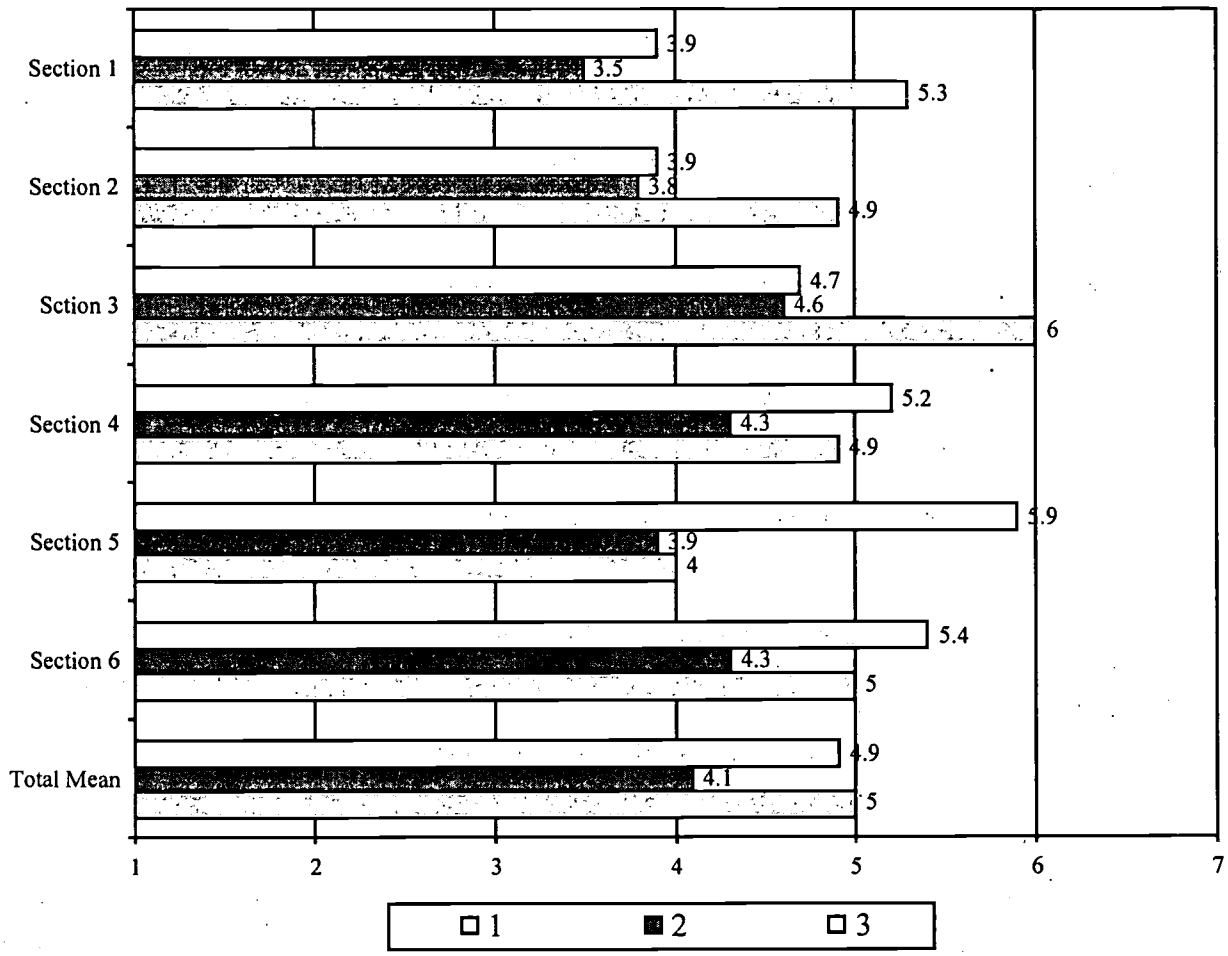
Figure 7. Mean satisfaction ratings by special education teachers for rural schools.



Special Education Teacher Satisfaction Questions

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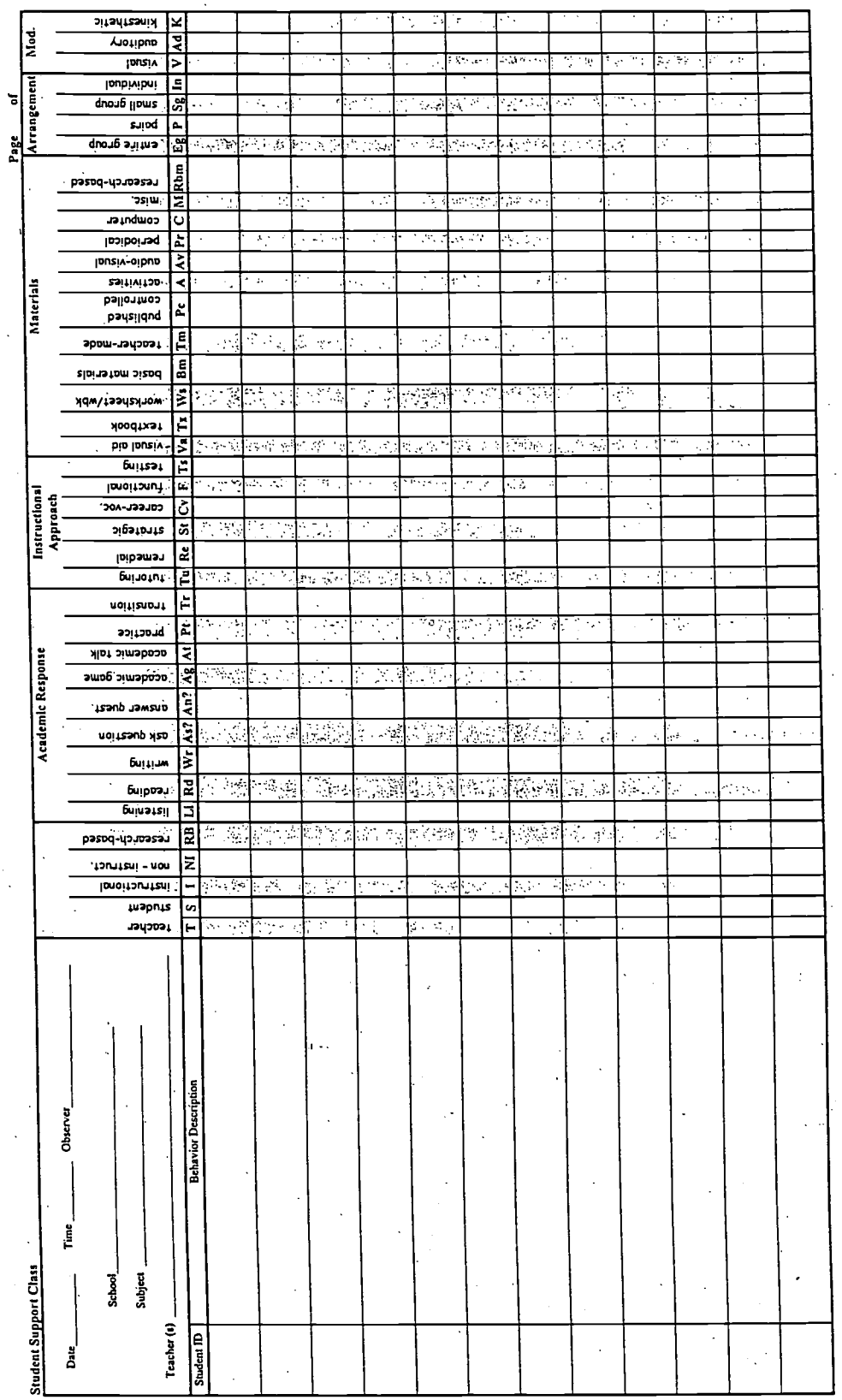
Section 6: Consider your own performance as a teacher with regard to ensuring the success (earned grades of C or above) of students with disabilities in general education classes.

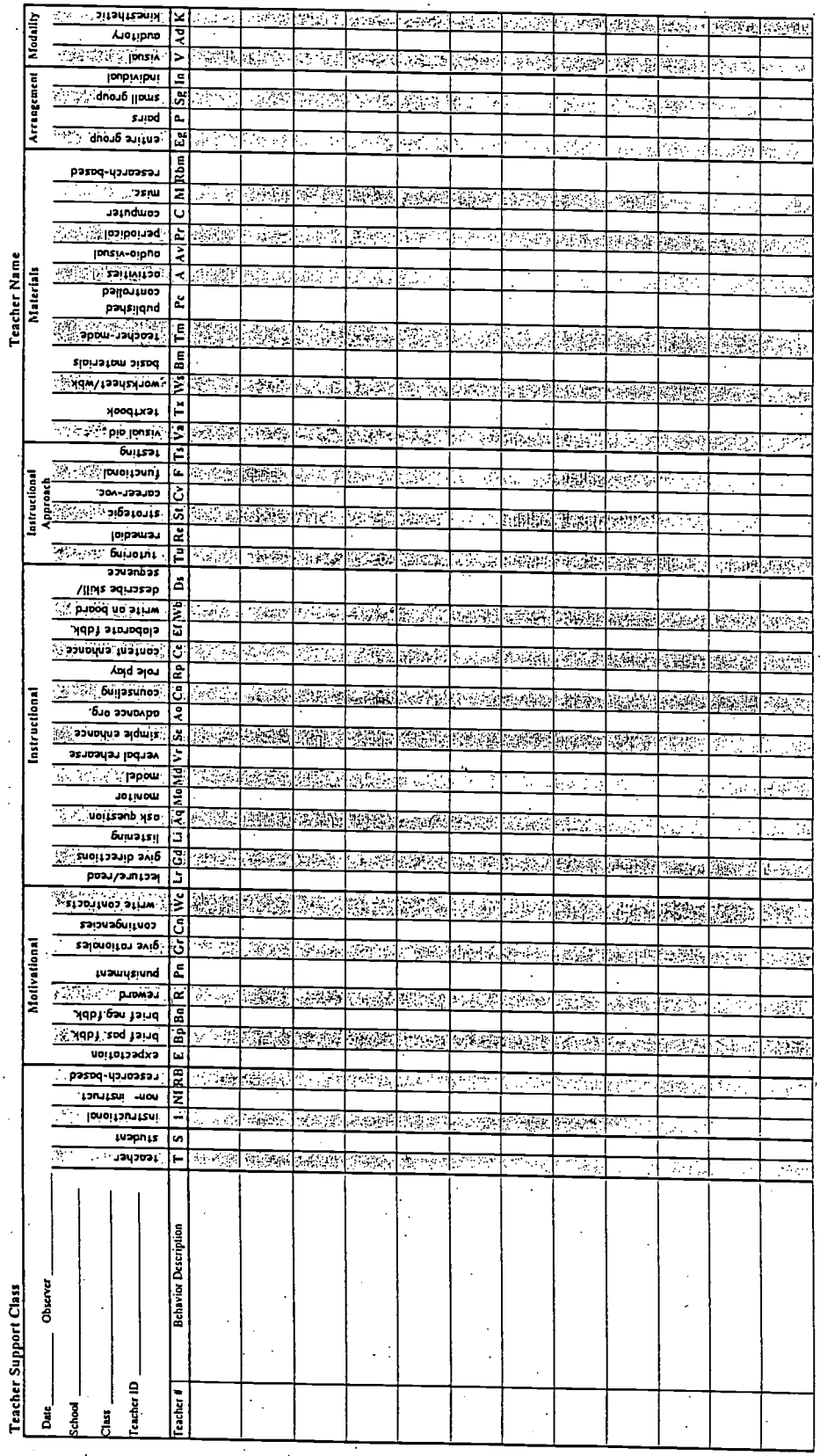
Figure 8. Mean satisfaction ratings by special education teachers for urban schools.

Appendix A
Student Observation Sheet



Note: These forms have been reduced from their original size

Appendix B
Teacher Observation Sheet



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