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ABSTRACT

The seventh in a series of studies investigating the educational context and outcomes for high school students with disabilities (SWDs), this study examined the high school context within which students with and without disabilities must succeed and the supports in place for assisting them. A questionnaire was administered to 70 high school teachers employed in three inclusive high schools in urban areas, 3 in suburban areas, and three in rural areas. Relative to SWDs, teachers indicated they frequently adapt curriculum and provide accommodations to improve learning and that teaching strategies related to "how to learn" were of equal importance to teaching content. Teachers reported smaller class size and more collaboration and communication with special education staff are changes needed to help SWDs meet educational standards. They reported spending between only 12 and 24 minutes per week in collaboration with special education teachers. Teachers believed that SWDs are more likely to be successful in life than students without disabilities who are low achieving. In addition, they are more interested in professional development activities that address the needs of low-achieving students without disabilities than activities focused on SWDs. Teachers indicated that goals/attitudes and skills/abilities were factors contributing to academic failure. (CR)

Research Report #7

The educational context and outcomes for high school students with disabilities: The perceptions of general education teachers

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Abstract

The purpose of this study was to gain information about the high school context within which students with and without disabilities must succeed and the supports in place for assisting them. A questionnaire was designed to be administered to general education teachers who taught required high school courses. Items in the questionnaire addressed course planning and instruction, assessments and accommodations, professional development, collaboration, the role of standards, and beliefs about student success and failure. Participants were seventy high school teachers, employed in nine public high schools serving grades nine through twelve in four states. All of the teachers taught one or more core classes in which students with disabilities were enrolled.

Relative to students with disabilities, the teachers indicated that they frequently adapt curriculum and provide accommodations to improve learning and that teaching the students strategies related to "how to learn" were of equal importance to teaching content. The teachers reported that smaller class size and more collaboration and communication with special education staff are changes that are needed to help students with disabilities meet standards. They reported spending, on average, between only 12 and 24 minutes per week in collaboration with special education teachers. Of interest is the fact that general education teachers believe that students with disabilities are more likely to be successful in life than are students without disabilities who are low achieving. In addition, they are more interested in professional development activities that address the needs of low-achieving students without disabilities than in activities focused on students with disabilities.

Relative to factors that contribute to academic failure for students with and without disabilities, teachers gave youth goals/attitudes and youth skills/abilities the highest ratings. Teachers indicated that school-wide structures and policies contribute the least to academic failure. They also indicated that they believe that student progress is satisfactory when about 50% of the students are mastering at least 50% of the content.

Since 1985, the practice of including students with disabilities in general education classrooms has been increasing (U.S. Department of Education [USDE], 2000). These students enter high school with large academic skill deficits (e.g., Warner, Schumaker, Alley, & Deshler, 1980) and have difficulty meeting the demands of the required general education classes. They struggle to pass and often fail (e.g., Bulgren, Schumaker, & Deshler, 1988; Hughes & Schumaker, 1991). Therefore, questions arise regarding whether high school general education courses are structured to assist at-risk learners, whether teachers use instructional practices that are appropriate for students with disabilities and for low achieving students without disabilities, whether the instructional materials are designed to meet the needs of these students, and whether support mechanisms are in place to help students succeed.

The Institute for Academic Access (IAA) addresses these issues and questions. Its purpose is to help protect the right to learn for all students by providing educators with the tools and understanding necessary to successfully teach and improve educational outcomes for high school students with disabilities. The IAA staff is conducting research to study the high school context and to create instructional methods and materials that will give students with disabilities and low-achieving students without disabilities authentic access to, and ensure their success in, the high school general education curriculum.

To accomplish this goal, IAA has five objectives: (1) to study the high school context within which students must succeed and the current supports in place for assisting them; (2) to create effective instructional interventions that can be used in general education classes across the subject areas; (3) to develop effective ways to help teachers learn about and implement those interventions; (4) to develop effective ways for helping schools to reform the educational processes they are using at the instructional level; (5) to disseminate findings nationally to practitioners and their trainers through the use of manuals, videotapes, workshops, and other media.

This report addresses the first objective and results from research conducted to learn about teacher planning, practices, and beliefs and how they impact or relate to students with disabilities and to low-achieving students without disabilities. It describes, from the perspective of general education teachers, the high school context within which students must succeed. It details course planning and instruction, assessments and accommodations, professional development, collaboration, the role of standards, and beliefs about student success and failure.

Methods

Subjects

Seventy high school teachers working in nine schools volunteered and signed consent forms to indicate their willingness to participate in the study. All participants taught one or more

core classes in which students with disabilities were enrolled. Most classes had between 22 and 27 students enrolled in them, and most teachers taught two or three sections of the same course.

Of the seventy teachers, twenty-one taught in rural schools, twenty-six taught in suburban schools, and twenty-three taught in urban schools. Sixteen teachers taught English, ten taught Spanish, twenty taught algebra, fourteen taught biology, and ten taught U.S. history. For each of the three types of schools (rural, suburban, and urban), at least three teachers from each of these five core subject areas participated.

Fifty-six percent of all of the subjects were females; 44 percent were males. However, these percentages did vary according to type of school: 70 percent of the teachers in the suburban schools were females while only 43 percent of the teachers in the rural schools were females. For urban schools, 52 percent of the teachers were females, and 48 percent were males. Sixty-nine of the seventy subjects answered the question about ethnicity. Sixty-two were white. Two of the subjects were Black/African American; both were male and taught in urban schools. One participant was American Indian/Alaskan Native, and four participants placed themselves in the "other" category.

Forty-seven of the seventy teachers (67%) had earned a Master's degree, and two of those forty-seven teachers (2.9% of the seventy participating teachers) had earned doctorates. A greater percentage (81%) of the teachers in the suburban schools had degrees beyond their Bachelor's degree than did teachers in urban areas (57%). Approximately 62 percent of the rural teachers had earned Master's degrees.

Sixty-nine of the seventy teachers answered the question asking for the number of college or university special education courses completed. Sixty-five percent of the suburban teachers had completed one or two courses while 45 percent of the rural teachers and 48 percent of the urban teachers had completed one or two special education courses. Overall, approximately one-third of the teachers had *not* completed any special education courses: 27 percent of the suburban teachers, 39% of the urban teachers, and 33 percent of the rural teachers. Six teachers (two suburban, one urban, and three rural) had completed three special education courses, and three teachers (two urban and one rural) had completed five special education courses.

More than one-third (37%) of the teachers had taught twenty years or longer: 42% of the suburban teachers, 39% of the urban teachers, and 29% of the rural teachers. Thirty percent of the teachers in the study had taught for five years or fewer; this figure did not vary much among types of schools (27% of the suburban teachers, 30% of the urban teachers, and 33% of the rural teachers). Slightly less than a third (31% and 30%, respectively) of the suburban and urban teachers had taught between six and 19 years. Approximately thirty-eight percent of the teachers in the rural schools had taught between six and 19 years.

All but two teachers in the study were certified to teach in their states. One of these teachers had two Bachelor's degrees, one in English and one in biochemistry; the other teacher had a Bachelor's degree in English. The state in which these teachers were working typically issues emergency credentials when necessary.

Settings

The teachers were employed in nine public high schools serving grades nine through twelve in four states (Kansas, Washington, California, and Oregon). 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).

Measurement Instruments

General education teachers completed two forms: the General Education Teacher Information Form and the General Education Teacher Questionnaire. The purpose of the General Education Teacher Information Form was to gather information such as gender, date of birth, degrees held, certifications, and teaching history. Information from this form was reported in the Subjects section above. The 15-page General Education Teacher Questionnaire contained 54 items, some of which contained multiple parts. The items focused on how students with disabilities and low-achieving students without disabilities who had been enrolled in required courses for academic, as opposed to social, purposes were faring in those courses and the methods being used to support their success.

Questionnaire items were related to teacher planning, use of accommodations and adaptations, the influence of standards-based reform, teachers' beliefs related to referring

students with disabilities for special education services, teacher awareness of IEP's, collaboration, professional development, factors related to student success and failure, types of knowledge required in general education classes, and deficits across levels of knowledge.

Responses to the items were of four types. Twenty-two items asked the teacher to use a seven-point Likert-type scale. Nineteen open-ended items allowed the teachers to write several lines of response to questions such as, "Why do you believe students with disabilities sometimes fail in your school?" Eight other open-ended items asked for shorter, more restricted responses to answer questions such as, "The students in this course are at what grade levels?" and "How many hours do you spend collaborating with special education teachers and support staff?" Four items asked for responses that involved ranking a set of listed items (e.g., possible ways to spend extra time were listed, and teachers ranked them as they felt they related to the impact they would have on the success of students with disabilities). One item asked two open-ended questions - one that was of the restricted type and the other allowing the teacher to write several lines of response.

Procedures

Teachers completed the questionnaire independently on their own time and were given approximately three weeks to do so. The completion of the questionnaire was part of their participation in the study for which they were each paid $50.00. The teachers were asked to choose one course that they taught in which students with disabilities were enrolled and to answer the questions on the questionnaire in relation to a particular section of that course in which the students with disabilities were enrolled.

Results

Results will be presented relative to teacher practices or beliefs with regard to planning for instruction; the influence of standards-based reform on teacher planning; changes needed in the schools and in course planning to help students with disabilities meet standards; adaptations and accommodations; technology; teaching strategies and content; referral of students for special education services; Individualized Education Programs (IEPs); communication and collaboration with other teachers, including special education teachers; professional development; the likelihood of life success for low-achieving students without disabilities and students with disabilities; the appropriateness of low-achieving students and students with disabilities being enrolled in general education teachers' courses; supports for students; factors that contribute to academic failure and barriers to success; types of knowledge necessary for success in secondary content courses; student deficits across levels of knowledge; and assessments used to determine content mastery.

Teacher Planning for Instruction

To determine the current amount of planning time taken for a specific course in which students with disabilities were enrolled, teachers were asked about how much time they devoted to different types of planning activities. On average, teachers reported spending between 10 and 11 hours per week on course planning activities for the targeted course -- four hours during the school day, about four hours beyond the school day, and about 3 hours during the weekend. Teachers in urban and rural schools reported spending approximately one hour more each week than did teachers in suburban schools. However, teachers in suburban schools reported spending 9.3 days in the summer. This is more time than that reported by teachers in urban schools, who reported spending 7.2 days during the summer, and by teachers in the rural schools, who reported spending 6.7 days during the summer. While there was variation as to *when* teachers spent planning time, there was little variation on the overall *amount* of time that teachers devoted to planning activities for the targeted course.

Planning also appears to be shaped by how much content a teacher believes a student must master to be successful in subsequent units and how often a teacher plans to reteach critical information if necessary. Across all nine schools, teachers reported that approximately 63% of the content was critical for subsequent success in another course. (Urban teachers reported a mean of 66%; suburban teachers reported a mean of 60%; and rural teachers reported a mean of 64%.)

Sixty-three percent (N = 44) of the teachers reported that they would stop and reteach only if the majority of students in the class (judged, by comments, as being 50% of students in the class or greater) showed evidence (e.g., on quizzes or tests, in discussions) that they did not understand the content. Approximately 7% of the teachers (N = 5) reported they would reteach information if a group smaller than 50% of the class showed evidence that they did not understand the content; approximately 6% (N = 4) reported that they would reteach only if their top students did not seem to understand; approximately 15% (N = 11) reported that their decision to reteach would be based on ongoing classroom checks on student learning; and approximately 8.6% (N = 6) reported that they would never reteach content that they had already covered.

When asked to judge what percent of the content was critical for all students to master before going on to the next unit, teachers reported a mean of 51.5%. Taken with the previous data about what percentage of the students in the class should master the content before reteaching, these teachers indicated that they believe that progress is satisfactory when about 50% of the students are mastering at least 50% of the content.

Teachers were asked how they would spend extra time to make the greatest impact on increasing the success of students with disabilities enrolled in their classes. Across urban, suburban, and rural schools, working individually or in small groups with students with

disabilities was consistently ranked as one of the top three choices. Teachers also indicated that they would choose to spend time in activities that would directly influence classroom actions (e.g., planning, redesigning curriculum, collaborating with other teachers) rather than in traditional professional development activities.

Influence of Standards-Based Reform on Teacher Planning

The move toward a standards-based teaching model has been the focus of current educational reform movements and the basis for the development of state assessments. However, the degree to which this standards-based teaching emphasis has shaped how teachers spend their planning time is unclear. Therefore, teachers were asked to report, on a 7-point scale, how the push for standards-based teaching affected their instructional planning. A rating of "1" meant "Not at all," a rating of "4" meant "Somewhat," and a rating of "7" meant "A great deal." Teachers in suburban and rural schools reported a mean rating of 5.4 each; teachers in the urban schools reported a lesser effect, with a mean rating of 4.7. Teachers across all groups reported that state standards affected their course, unit, and lesson planning to about the same degree (mean ratings ranged from 4.7 for lesson planning by urban teachers to 5.3 for course planning by rural teachers).

When teachers were asked to rate the advantages of the standards-based teaching model for all youth, both suburban and rural teachers responded with a mean rating of 4.4, and urban teachers responded with a mean rating of 4.3. Teachers responded with a lower mean rating when asked about the degree to which this model offers advantages for students with disabilities: the mean rating from rural teachers was 3.1, from urban teachers, 3.4, and from suburban teachers, 3.9. Mean ratings with regard to the advantages for other at-risk youth were identical, with the exception of suburban teachers, who gave a rating of 4.0. Teachers were also asked to indicate the degree to which they expected that students without disabilities would meet state standards for their targeted course. Teachers in both suburban and rural schools responded with a mean rating of 5.9, while those in urban schools gave a mean rating of 5.1. Teachers gave lower ratings when asked to indicate the degree to which they expected students with disabilities to meet state standards for their targeted course. Rural teachers gave a mean rating of 4.8, and both suburban and urban teachers responded with a mean rating of 4.7.

Changes Needed in Schools to Help Students with Disabilities Meet Standards

When asked to name three changes that needed to take place in their schools to help students with disabilities meet standards, teachers offered 157 responses. The category receiving the largest number of responses (20) was smaller class size and accounted for 12.7% of the responses. More collaboration and communication with special education staff was named 19 times and accounted for 12.1% of the responses. Other changes named were the following: more competent staff such as teachers, aides, tutors, and counselors (mentioned 15 times, 9.6%); more

work with students individually or outside of class (13 times, 8.2%); time to collaborate or more collaboration (12 times, 7.6%); changes in the curriculum to make it appropriate and to improve basic skills (9 times, 5.7%); training and information about students with disabilities and how to help them (9 times, 5.7%); parent conferences and parental involvement (8 times, 5%); more planning time and more time in general (6 times, 3.8%); updated and accessible technology/ facilities and equipment (6 times, 3.8%); increased or better communication (6 times, 3.8%); and earlier identification of students with disabilities or informing general education teachers earlier (5 times, 3.1%). No other responses received more than three mentions.

Changes Needed in Course Planning to Help Students Meet Standards

When teachers were asked what three changes they could make in the way they plan courses to help students with disabilities meet standards, a total of 145 responses resulted. Nearly one-fourth of the responses (22.8% and 33 responses) related to the modification of the curriculum. Other changes mentioned included changing teaching methods and strategies (mentioned 16 times and accounting for 11% of the responses), increasing knowledge about disabilities and specific students with disabilities (13 times, 9%), planning for more individual time with students (10 times, 6.9%), using more cooperative learning or more small groups and paired structures (9 times, 6.2%), using or providing alternative materials (9 times, 6.2%), collaborating more with the special education staff (8 times, 5,5%), planning with standards in mind (7 times, 4.8%), and reducing workloads and assignments (6 times, 4.1%). No other responses were found more than five times.

When teachers were asked to name changes they could make in the way they teach courses to help students with disabilities meet standards, 16 responses (out of a total of 143 responses) mentioned providing more individual attention to students. This accounted for 11.2% of the responses. Fourteen responses (9.8%) related to using a variety of teaching methods. Working more productively and more frequently with special education staff (mentioned 13 times) and changing lessons to meet students' needs (also mentioned 13 times) each accounted for 9.1% of the responses. Other comments included having a slower pace and spending more time (mentioned 9 times, 6.3%), using more cooperative learning and small groups (8 times, 5.6%), and having more hands-on activities and fewer lectures (7 times, 4.9%). No other responses received more than five mentions, although there were 15 responses with five or fewer mentions.

When teachers were asked what changes they could make in the way they taught courses to help low-achieving students without disabilities meet standards, of the 138 responses received, the highest number (20) related to using a variety of teaching methods. This accounted for 14.5% of the responses. Next, with 12 mentions (8.7%) was giving more individual attention to students. Other changes that were named at least six times included changing the lesson to meet

student needs (11 times, 8.0%), using more cooperative learning or small-group work (9 times, 6.5%), slowing the pace and spending more time (6 times, 4.3%), and providing more hands-on activities and fewer lectures (6 times, 4.3%). No other responses received more than five mentions, although 17 responses received five or fewer mentions.

Teacher Use of Adaptations and Accommodations

Part of instructional planning for students with disabilities involves making curriculum adaptations and accommodations to improve learning. Teacher ratings across all sites (the urban, sites, with a mean rating of 5.4 and both the suburban and rural sites, with a mean rating of 6.1) indicated that teachers try to improve poor curriculum materials through adaptations and accommodations. Knowing that teachers are willing to adapt curriculum and provide accommodations reveals only part of the picture. In addition, information is needed about the most common adaptations and accommodations that teachers regularly use in their courses. When asked, teachers gave 245 responses. Thirty-seven percent of the responses (91 responses) named assignment accommodations regarding choice (e.g., tests taken orally), time (e.g., extra time allotted for tests and assignments), content (e.g., simpler tests), and opportunity (e.g., opportunity to have assignments pre-checked and the chance to re-do assignments). Accommodations related to testing were named 45 times, accounting for 18% of the responses. Modifications of teacher/student interaction were mentioned 30 times (12% of the responses), and both teaching to individuals, small groups, one-on-one help and accommodations for special needs were mentioned 22 times each (each accounting for 9.0% of the responses). Arranging for others to help students was mentioned 16 times (6.5%), and using supplementary material was mentioned 11 times (4.5%). No other response was mentioned more than 6 times.

Another question asked teachers to think about their use of accommodations as they assessed students' mastery of course content and to indicate the degree to which (using a Likert-type scale of 1–7 as described above) they used the following accommodations: audio cassette recordings, distraction-free environments, extra time, more than one version of a test, note takers, readers, shortened tests, or other accommodations. Across all schools, giving extra time was awarded the highest rating. Suburban and rural teachers gave mean ratings of 6.1 and 5.9 to this accommodation, respectively, and urban teachers indicated their use of this accommodation with a mean rating of 5.1. Overall, the next highest ratings were given to a distraction-free environment with both urban and suburban teachers awarding this accommodation a mean rating of 5.0, while rural teachers gave this a mean rating of 4.6. All other accommodations across all three types of schools were given ratings below 4.0.

Teachers were given a list of assessments that included authentic/performance assessment tasks, class participation, daily assignments, homework assignments and worksheets, group presentations, group projects, individual presentations, individual projects, portfolios, quizzes,

research/reaction papers, student notebooks, textbook/publisher unit tests, and unit tests that they themselves prepared. They were asked how willing they were to make adaptations or modifications in these assessments for students with disabilities. In all cases, teachers gave a mean rating of 5.0 or above for their willingness to make adaptations or modifications in performance assessment tasks, class participation, daily assignments, individual presentations, and individual projects. (Ratings ranged from 5.1 from rural teachers for authentic or performance assessment tasks to 6.1 from suburban teachers for individual presentations.)

For 11 out of the 13 types of assessments listed, suburban teachers gave the highest ratings with mean ratings ranging from 5.5 to 6.1.They awarded the adaptation or modification of individual presentations a mean rating of 6.1 and adaptation or modification of individual projects a 6.0. Suburban teachers gave mean ratings of 5.2 and 4.9, respectively, to indicate their willingness to make modifications for notebooks and for quizzes.

Rural teachers gave a mean rating of 5.8 to indicate their willingness to adapt or modify daily assignments, homework, and worksheets. Mean ratings indicating their willingness to adapt or modify other assessments is as follows: class participation, 5.5; individual presentations and individual projects, 5.2 each; unit tests that the teachers themselves prepared and authentic or performance assessment tasks, 5.1 each; and quizzes and student notebooks, 3.9 each.

Urban teachers gave class participation and daily assignments, homework and worksheets each a mean rating of 5.4 but a rating of only 4.0 to textbook or publisher unit tests. Ratings for their willingness to adapt the other types of assessments fell between 4.0 and 5.4.

Teacher Use of Technology

Teachers were asked about the degree to which they used technology in instruction. Teachers in suburban and rural schools reported mean ratings of 5.3 and 4.8, respectively, while the teachers in the urban schools reported a lower rating of 3.8. Uniformly lower than these ratings were the mean ratings indicating the use of technology to specifically help students with disabilities learn, with suburban teachers awarding this a mean rating of 3.7 and rural teachers awarding a mean rating of 3.3. Ratings from urban teachers were lower, with a mean of 2.4. Ratings were similar for teachers' use of technology to help low-achieving students without disabilities, with suburban teachers responding with a mean rating of 3.6, rural teachers, with a mean of 3.7, and urban teachers, with a mean of 2.6.

Teachers then responded to a question asking them to indicate the degree to which they required students with disabilities and low-achieving students without disabilities to use the Internet. Teachers in rural schools responded with mean ratings of 3.5 and 3.4, respectively; suburban teachers responded with a mean rating of 2.8 for each group of students; teachers in urban schools gave a mean rating of only 2.1 for each group of students. These ratings seem to

indicate that teachers are more likely to use technology in general than to use it for students with disabilities or low achievers.

Research-Based Practices

Over the past ten years, more emphasis has been placed on teacher use of research-based practices in schools. To determine how teachers viewed their adoption of research-based practices, they were asked about implementation efforts related to students with disabilities and low-achieving students without disabilities. Teachers indicated the degree to which their schools support implementation of research-based practices designed to enhance the learning of students with disabilities and students without disabilities who are low achieving with the following mean ratings: urban teachers, 3.9; rural teachers, 4.5; and suburban teachers, 5.5. The ratings indicating the degree to which constraints or barriers prevent the implementation of research-based practices were higher for urban teachers, who reported a mean rating of 4.9. Rural teachers provided a mean rating of 3.1, and suburban teachers provided a mean rating of 2.9. Those schools reporting the greatest barriers reported the least use of research-based practices.

However, these data must be interpreted in light of what teachers identify as research-based practices. To understand this, teachers were asked to each list five research-based methods that they use. The 70 teachers in this study generated only 150 responses out of a possible 350. The most frequent response of "cooperative learning' was named 25 times and represents 17% of the responses. The second most frequent response was "group discussions and activities," named 13 times (8.7% of the responses). These were followed by "direct instruction" (named 12 times, 8%), "graphic organizers'' (named 6 times, 4%), ''questioning" (named 4 times, 2.7%), "brain-based teaching," "project-based teaching," "hands-on activities," "silent reading," and "individualized instruction" (each named 3 times, 2%). The remaining 75 responses were distributed across 61 categories.

Teaching Strategies and Content

How teachers perceive their role in the education of a student has the potential for influencing what approaches they are likely to adopt in their teaching. To better understand how general education high school teachers perceived their instructional role, they were asked the relative importance of teaching strategies and content. Teachers indicated the degree to which they believed that teaching strategies to students has equal importance with teaching content with a mean rating of 5.9 from rural teachers and a mean rating of 6.0 from both suburban and urban teachers. All groups gave lower mean ratings to the proposition that teaching content was more important than teaching strategies, rural and suburban teachers each awarding this a 3.9 and urban teachers awarding this a 3.7. Teachers gave the following mean ratings to the idea that in their role they should reinforce student use of learning strategies taught by special education and remedial teachers: rural, 5.5; suburban, 5.9; urban, 5.5. Teachers were also asked to rate the

degree to which they believed their role included showing students how to learn at the same time that they taught content. Responses included a mean rating of 6.1 from both rural teachers and suburban teachers and a mean rating or 6.3 from urban teachers. In fact, this belief was one of the highest rated items on the entire questionnaire. Interestingly, given the emphasis on inclusive teaching, teachers did not rate as highly their support for allowing another teacher to come into their classroom to teach learning strategies. Rural teachers rated this practice with a mean of 4.7, suburban teachers, with a mean of 4.9, and urban teachers, with a mean of 4.5. To conclude this questionnaire item, both rural and urban teachers provided a mean rating of 1.5, and suburban teachers provided a mean rating of 1.7 for the notion that they should teach content without showing or teaching strategies.

Likelihood of Referral of Students for Special Education Services

By the time that students with disabilities enter the high school environment, many students with significant disabilities have already been identified as having a disability and are receiving special education services. However, some students may slip through the cracks and may not be identified as having a disability. To better understand the perspective of high school teachers on these issues, teachers were asked about the likelihood that they would refer a student for services and the likelihood that special education services would help the student meet the demands of their courses.

Suburban teachers gave a mean rating of 5.0 to indicate the likelihood that they would refer a student with learning difficulties for special education services and a mean rating of 5.4 to the likelihood that special education services would help a student meet the demands in their courses. Teachers in urban and rural schools gave lower mean ratings: mean ratings of 4.5 and 4.3, respectively, to indicate the likelihood of their referring a student for special education services and mean ratings of 4.1 and 3.9, respectively, to indicate the likelihood that the referral would help the student.

Teacher Awareness of an IEP

For students with disabilities, the Individualized Education Program (IEP) meeting is the legal vehicle used to make decisions about the appropriateness of and the required modifications related to standards, curriculum, teaching methods, and assessments across all classes in which the student is enrolled. For example, the IEP meeting may determine that certain standards are inappropriate given a specific disability, may require alternate textbooks, or may require that specific types of teaching methods be used across all of the student's classes. Several questions were asked to determine the degree to which the general education teachers were aware of the IEP process and their roles and perceptions of involvement in the process.

When teachers were asked to rate their awareness of the IEP process, teachers responded with some consistency among school types. Suburban teachers gave a mean rating of 6.0, and

rural and urban teachers gave mean ratings of 5.6 each. However, there were substantial differences between the level of reported teacher involvement in that process in suburban sites versus urban and rural sites. Teachers in suburban settings indicated their involvement in the IEP process with a mean rating of 5.9, the degree to which they were informed about how the IEP process affected their course with a mean rating of 5.5, the degree to which they found that IEP decisions were realistic to implement with a mean rating of 5.1, and the degree to which IEP decisions affected their teaching plans with a mean rating of 4.7. Rural teachers awarded a mean rating of 4.1 and urban teachers awarded a mean rating of 3.7 to indicate the degree to which they were involved in the IEP process. Teachers in both rural and urban schools gave relatively low mean ratings to indicate the degree to which they felt informed about how IEP decisions would affect their courses, awarding mean ratings of 3.5 and 3.1, respectively. Urban teachers rated the effect that IEP decisions had on their teaching with a mean rating of 3.4, and rural teachers gave a mean rating of 3.0 to the effect IEP decisions had on their teaching. Urban and rural teachers gave mean ratings of 4.7 and 4.1, respectively, to reflect the degree to which IEP decisions were realistic to implement.

However, regardless of how involved they felt in the IEP process, teachers across all types of schools gave relatively low ratings to their desire to be more involved in IEP decisions. Both urban teachers and suburban teachers indicated this with a mean rating of 3.6, and rural teachers responded with a mean rating of 3.2. The suburban teachers gave a mean rating of 2.5 to indicate the degree to which they felt IEP decisions had a negative effect on other students, while teachers in rural and urban schools indicated this with a mean rating of 3.2 and 3.0, respectively.

Teachers' Beliefs about Communicating with Special Education Teacher

Teachers were asked about the degree to which communicating with the special education teacher about students with disabilities would be helpful. Suburban teachers answered this question with a mean ranking of 6.2, followed by a mean ranking of 6.0 from rural teachers, and a mean ranking of 5.2 from urban teachers. Teachers were also asked about the degree to which communicating with the special education teacher about low-achieving students without disabilities would be helpful. The teachers in the suburban district gave this a mean rating of 5.7, followed by rural teachers with a mean rating of 5.2 and urban teachers with a mean rating of 4.5.

Collaboration with Other Teachers

School reform efforts on behalf of students with disabilities have often focused on planning more inclusive teaching arrangements that revolve around collaboration with other teachers. However, teachers across all nine schools reported that they spend, on average, less than thirty minutes per week in collaboration with special education and support teachers. Urban teachers reported a mean of 24 minutes; suburban teachers, a mean of 18 minutes; and rural teachers, a mean of 12 minutes. They reported spending more time collaborating with other

teachers in their own departments (on average, urban teachers spend 1.1 hours, suburban teachers spend 2.9 hours, and rural teachers spend 1.2 hours). Teachers in suburban schools reported spending much less time collaborating with teachers in departments other than their own (with a mean of 12 minutes) than did teachers in rural schools (with a mean of 30 minutes) or urban schools (with a mean of 1.2 hours). Regarding total collaborative hours per week, teachers in urban schools reported a mean of approximately 2.8 hours per week. Teachers in suburban schools reported a mean of approximately 3.3 hours per week, and teachers in rural schools reported that, on average, they collaborate 1.8 hours per week. However, while collaboration varies among teachers in the different school types, very little collaboration appears to take place with special education teachers.

Professional Development Opportunities

One issue dealt with how teachers feel about professional development opportunities to help them meet the needs of students with disabilities. Most teachers in suburban (on average, 73.1%) and rural schools (on average, 63.6%) indicated that they would like more staff development opportunities related to helping students with disabilities. Only an average of 47.8% of teachers in urban schools indicated that they would like more of these types of professional development activities. Consistently higher percentages of teachers from all schools (on average, 86.4% of the suburban teachers, 85.7% of the urban teachers, and 65.2% of the urban teachers) indicated an interest in professional development activities that would address the needs of students without disabilities who are low-achieving as opposed to activities that would address the needs of students with disabilities.

Teacher's Beliefs Regarding the Likelihood of Life Success

The teachers were asked about whether students with disabilities and those without disabilities are likely to be successful in life. On average, across all schools, teachers felt that students with disabilities were more likely to be successful in life than were students without disabilities who were low achieving. Suburban and urban teachers rated their belief that students with disabilities would be successful with mean ratings of 5.7 and 5.6, respectively, and rural teachers did so with a mean rating of 5.0. The ratings indicating beliefs about the likelihood of success for low-achieving students without disabilities were uniformly lower but followed the same pattern of rankings: suburban teachers responded with a mean ranking of 5.1; urban teachers, with 4.9; and rural teachers, with 4.6.

Teachers' Beliefs about Students Being Enrolled in Their Courses

When asked for their beliefs about whether students with disabilities and low-achieving students without disabilities should be enrolled in their courses, suburban and urban teachers provided mean ratings above 5.0, while rural teachers' mean ratings were above 4.0. Suburban teachers awarded both groups of students a mean rating of 5.5, and urban teachers awarded a

mean rating of 5.6 for students with disabilities and a mean rating of 5.4 for students without disabilities who are low achieving. Mean ratings from the rural teachers were lower for both students with disabilities (receiving a mean rating of 4.4) and for students without disabilities who are low achieving (receiving a mean rating of 4.5).

Teachers' Beliefs about Supports for Students

Teachers were asked about their beliefs regarding the adequacy of supports from sources outside their courses to ensure the success of students with disabilities in their courses. To reflect their confidence in outside supports, suburban teachers gave a mean rating of 4.8, rural teachers gave a mean rating of 4.2, and urban teachers gave a mean rating of 3.4. Mean ratings reflecting confidence in the supports for those low-achieving students without disabilities were uniformly lower: teachers in suburban schools responded with a rating of 4.3, the rural teachers, with a 3.9, and the urban teachers, with a 3.3.

Factors that Contribute to Academic Failure and Barriers to Success

Factors contributing to academic failure of students with disabilities. A series of questions was designed to explore the degree to which the following factors contribute to academic failure of students with disabilities: school-wide structure and policies, curriculum standards and emphasis, textbooks and materials, tests and assessment methods, teaching methods, planning opportunities and support, youth skills and abilities, and youth goals and attitudes. A rating of '7' indicated that the factor contributed to academic failure to a great degree; a rating of '4' indicated that the factor contributed somewhat; and a rating of '1' indicated that the factor did not contribute at all.

The factor receiving the highest rating, youth goals and attitudes, was the same factor for all three types of schools, each having a mean rating of 5.4. Teachers in the urban schools awarded a mean rating of 5.1, and suburban teachers awarded a mean rating of 5.0 to youth skills and abilities as contributors to academic failure. No other factor was given a mean rating above 5.0 for any group of schools. Across all types of schools, teachers indicated that school-wide structures and policies contributed least to academic failure. Suburban teachers gave this factor a mean rating of 2.6; rural teachers gave it a mean rating of approximately 3.1; and urban teachers gave school-wide structures and policies, as well as teaching methods, mean ratings of 3.9. Teaching methods also received relatively low mean ratings from rural teachers (3.9) and suburban teachers (3.6).

Other factors contributing to academic failure of students with disabilities. There were 144 responses to an open-ended question to determine other factors to which teachers attribute failure of students with disabilities. Twenty responses (13.9%) indicated that there is not enough time to help students with disabilities or give them individual attention, and as a result they slip through the cracks or are ignored; another 20 responses (13.9%) indicated that these students

choose to fail, don't want to work, give up, lack effort, and have low motivation or a bad attitude. Eleven responses (7.6%) indicated that the teachers believed that their schools didn't offer appropriate services or support, and 10 responses (7%) indicated that family issues and lack of parental support were the problems.

Eight responses (5.5%) indicated that teachers didn't know about the disability or weren't notified early enough, and another 8 responses (5.5%) indicated that students didn't ask for help, lacked confidence and self-esteem, or didn't believe they could succeed. Close to 5% of the responses (7 responses) mentioned that students were overwhelmed with too much responsibility, were frustrated, afraid, or intimidated and another seven responses indicated that there was a lack of communication among all parties. Two items had six responses each (4.1%) and indicated that students had trouble with assignments or lacked ability and that students lacked background knowledge and basic skills.

Factors contributing to academic failure of low-achieving students without disabilities. Teachers were again asked to rate the following factors but this time with regard to the degree to which they contributed to academic failure of students without disabilities: school-wide structure and policies, curriculum standards and emphasis, textbooks and materials, tests and assessment methods, teaching methods, planning opportunities and support, youth skills and abilities, and youth goals and attitudes. The two factors receiving the highest mean ratings were the same as those given for students with disabilities. The factor of youth goals and attitudes was rated the highest, with mean ratings of 5.8 from both the urban and suburban teachers and a mean rating of 5.7 from the rural teachers. These ratings were slightly higher than those given for students with disabilities. Youth skills and abilities followed as a factor, with a mean rating of 5.1 from urban teachers, a mean rating of 5.0 from rural teachers, and a mean rating of 4.8 from suburban teachers. Again, the lowest rating (a mean rating of 2.6 from suburban teachers) was given for the impact of school-wide structures and policies on academic failure. In addition, teaching methods were given mean ratings of 3.4 from urban teachers, 3.2 from suburban teachers, and 3.3 from rural teachers.

Other factors contributing to academic failure of students without disabilities. When the teachers were asked, in an open-ended question, why they believed that students who do not have disabilities sometimes failed in their schools, they gave 181 responses. In only 11 of the responses (6%) were teachers mentioned directly as being a reason that students without disabilities sometimes fail. Ten responses (5.5%) indicated that teachers can be inflexible and unwilling to accommodate, and one response (0.5%) mentioned lack of teacher training. In 14 of the responses (7.7%, and the fourth highest number of responses), teachers indicated a belief that there was not enough time to help, not enough individual attention, and that students slip though the cracks and are ignored. Seventy-three percent (133) of the reasons given put the

responsibility for failure with the students themselves and/or their families. The most frequently given reasons included the following: students choose to fail, don't want to work, lack effort, and have low motivation and bad attitudes (22.1%); family issues and lack of parental support (13.3%); students don't ask for help, lack confidence and self-esteem, and don't believe they can succeed (8.7%).

Description of the three greatest barriers to student success in teachers' courses. When the teachers were asked to describe the three greatest barriers to student success in their courses, they responded with a total of 210 responses. The highest number of responses (57), accounting for 27% of the responses, indicated that one of the greatest barriers was the students' poor or counter-productive attitudes and behaviors. Next was students' neglect of work or poor study habits (36 responses, accounting for 17.1% of the responses). Other barriers that were attributed to the students themselves and/or to their families included factors such as student stress, low attendance, low ability, and unsupportive parents. For approximately 60% of the responses, the greatest barrier was placed within the students, and the factors named were similar to those mentioned above as contributing to academic failure in general.

The third highest response (33 responses, accounting for 15.7% of the responses) was the failure of skills to be taught or acquired in prior grades or poor skills in general. Another area, which received 20 responses (9.5%), was associated with constraints on teachers' time, interruptions, distractions, too little one-on-one instruction, and class size. Therefore, teachers see the greatest barriers as those brought to school by students followed by constraints over which they had no control.

Factors that hinder and changes to promote success for students of differing cultural backgrounds. When teachers thought about factors that might hinder success for students of differing cultural backgrounds, a different set of factors emerged. Of the 166 responses, forty-nine responses (30%) named language barriers, 22 (13%) were related to lack of acceptance from other students, 18 (11%) named customs or ethnic and cultural difference, and 16 (nearly 10%) of the responses blamed a lack of cultural sensitivity from instructors and materials for impeding success. Teachers suggested changes that could be made in the schools to promote the success of students with differing cultural backgrounds. Of the 129 changes named, the most frequently mentioned included the encouragement and understanding of differences and the promotion of tolerance and respect (21 responses, 16.3%), an increased emphasis in cultural diversity in the curriculum (16 responses, 12.4%), more ESL (English as Second Language) staff and an increase in and improvement of ESL support (13 responses, 10%), the establishment of multi-cultural clubs, organizations, and programs (11 responses, 8.5%), and an increase in staff knowledge of other cultures (10 responses, 7.8%). Nine teachers indicated that they believed that no change was necessary.

Types of Knowledge Necessary for Success in Secondary Content Courses

A critical question for students enrolled in secondary content courses relates to the types of knowledge that they must demonstrate to succeed in those classes. The four types of knowledge listed on the questionnaire were basic skills and strategies, content knowledge, the ability to manipulate content knowledge, and the ability to transfer and apply that knowledge. These types of knowledge parallel various taxonomies such as Bloom's Taxonomy of Knowledge. The categories are somewhat condensed to allow for clustering of types of knowledge required in content courses. In questions related to these four types of knowledge, "success" was arbitrarily defined as a grade of "C" or better.

An initial question was designed to probe the degree to which success for students without disabilities in teachers' courses depended on demonstration of each of the four types of knowledge. Little variance among teachers in the different types of schools was observed. For example, teachers in rural schools, suburban schools, and urban schools indicated the degree to which success for students without disabilities depended on the demonstration of basic skills and strategies with mean ratings of 5.9, 6.0, and 6.2, respectively. High ratings were also given by teachers employed in the different types of schools with regard to the degree to which success depended on the demonstration of content knowledge (with mean ratings from rural teachers of 6.3; suburban, 6.5; and urban, 5.8) and the manipulation of content knowledge (with mean ratings from rural teachers of 6.1; suburban, 6.4; and urban, 5.9). However, teachers from all schools gave lower mean ratings to the degree to which success for students without disabilities depended on the transfer and application of knowledge. This was indicated with a mean rating of 5.2 from rural teachers, a mean rating of 5.7 from suburban teachers, and a mean rating of 5.3 from urban teachers. Although the mean ratings are extremely close, urban teachers gave their highest mean ratings to basic skills and strategies (6.2), and rural and suburban teachers gave their highest ratings to the demonstration of content knowledge (6.3 and 6.5, respectively).

Across all schools, teachers indicated that success depended to the greatest degree on the demonstration of content knowledge (a mean rating of 6.2 for all schools), with manipulation of content knowledge (a mean rating of 6.1 for all schools) and basic skills and strategies (a mean rating of 6.0 for all schools) being very close. Teachers indicated that success for students without disabilities depended to the least degree on the demonstration of transfer and application (a mean rating of 5.4 for all schools).

The same question was asked in relation to students with disabilities, that is, the degree to which success for students with disabilities in targeted courses depended on demonstrations of each of the four types of knowledge. Across all schools, the expressed degree to which each type of knowledge was important was lower for students with disabilities than it was for students without disabilities. In general, teachers indicated that success for students with disabilities

depended to the greatest degree on the demonstration of basic skills and strategies (with a mean rating of 5.9), followed by content knowledge (with a mean rating of 5.8), and manipulation of content knowledge (with a mean rating of 5.6). Demonstration of transfer and application was given a mean rating of 4.9. Rural teachers felt success for students with disabilities depended most on content knowledge (with a mean rating of 6.1); suburban teachers felt that their success depended most on the demonstration of basic skills and strategies as well as content knowledge (with a mean rating of 6.0 each), and urban teachers felt that their success depended most on a demonstration of basic skills and strategies (with a mean rating of 5.7).

Deficits Across Levels of Knowledge

Lack of basic skills and strategies. The teachers were asked to indicate the degree to which various groups of students lacked basic skills and strategies. Groups of students listed on the questionnaire were learning disabled (LD), emotionally/behaviorally disordered (EBD), low achieving but not identified as having a disability (LA), normally achieving (NA), and other. For students with LD, LA students, and EBD students, mean ratings ranged from 4.2 (the mean rating given by suburban teachers to LA students) to 5.0 (the mean rating given by urban teachers to LA students. Ratings for NA students were all lower, ranging from a mean rating of 2.9 given by suburban teachers to a mean rating of 3.7 given by urban teachers.

Lack of content knowledge. The teachers were also asked to indicate the degree to which the student groups lacked the sufficient prerequisite background content knowledge needed to be successful in their courses. The highest mean rating of 5.2 was given to the LD group by the rural teachers and to the LA group by urban teachers. Suburban teachers gave the lowest mean rating of 4.0 to the LA group and also gave mean ratings of 4.1 to the EBD and LD groups. All other mean ratings given to the LA, LD, and EBD groups to represent the degree to which these groups lacked sufficient background content knowledge were either 4.5 or 4.6. NA students received mean ratings ranging from 1.3 from rural teachers to 3.0 from suburban and urban teachers. Urban teachers gave the highest rating to LA students; rural teachers gave the highest rating to students in the LD group; and suburban teachers, in general, made very little distinction among students, with the LD and EBD groups receiving a mean rating of 4.1 and the LA group receiving a mean rating of 4.0.

Lack of prerequisite abilities for higher order thinking and manipulating content knowledge. When teachers were asked the degree to which the same groups of students lacked sufficient prerequisite abilities required for manipulating content knowledge or doing the higher order thinking needed for success in their courses, their ratings indicated that, in general, all groups of students are more deficient in this area of knowledge than in basic skills and strategies and content knowledge. For LA students, EBD students, and students with LD, mean ratings ranged from 4.5, given by suburban teachers to the LA group, to 5.7, given to the LD group by

the rural teachers. Mean ratings across all schools were close: for students with LD, 5.3; and for EBD and LA students, 5.0. Again, the teachers in the rural schools gave the highest rating to students with LD, with a mean rating of 5.7, but made little distinction between EBD students and LA students, at 5.1 and 5.0, respectively. Urban teachers gave the highest mean rating to LA students (a mean rating of 5.4), with similar mean ratings for LD and EBD students of 5.1 and 5.2, respectively. Suburban teachers indicated that students with LD had the greatest deficiency, with a mean rating of 5.0. Suburban teachers gave EBD and LA students mean ratings of 4.7 and 4.5, respectively. NA students were given mean ratings of 3.6 and 3.0 from rural and suburban teachers, respectively, but the urban teachers' mean rating for NA students was higher, at 4.1.

Lack of prerequisite abilities required for content knowledge transfer and application. Finally, teachers were asked the degree to which the same groups of students lacked sufficient prerequisite abilities required for the transfer and application of content knowledge needed to be successful in their courses. Teachers from rural schools gave the highest ratings to their students with LD (with a mean rating of 5.3) but also provided relatively high ratings for EBD students (a mean rating of 5.1) and LA students (a mean rating of 4.7). They gave a mean rating of 3.6 to NA students. Teachers in suburban schools also gave high ratings to their students with LD, with a mean rating of 5.2. They gave mean ratings of 4.8 to both EBD students and LA students. Teachers in suburban schools gave the lowest mean rating (3.4) to NA students. Urban teachers gave LA students in their schools a mean rating of 5.6, which was the highest rating given among all groups of teachers. Urban teachers, in fact, gave higher ratings than did all other teachers to each group of students. They gave LA students a mean rating of 5.6, followed closely with a mean rating of 5.5 for EBD students, a mean rating of 5.4 for students with LD, and a mean rating of 4.9 for NA students. This mean rating of 4.9 given for NA students by urban teachers was noticeably higher than the mean ratings of 3.6 and 3.4 given by the rural and suburban teachers, respectively.

Assessments Used To Determine Content Mastery

To find out the kinds of assessments teachers use to assess student mastery and how frequently they are used, teachers were given a list of types of assessments such as the following: authentic performance tasks, class participation, projects, portfolios, quizzes, and notebooks. Teachers were asked to indicate the degree to which they used each of these to assess students' mastery of content in their courses. Suburban teachers reported the frequency with which they used unit tests they prepared themselves with a mean rating of 6.4; quizzes, with a mean rating of 6.2; daily assignments, homework and worksheets, with a mean rating of 6.1; and authentic performance tasks with a mean rating of 5.9. Rural teachers reported that they were most likely to use daily assignments, homework and worksheets (with a mean rating of 6.3 each) or unit tests they prepared (with a mean rating of 6.0). Urban teachers gave the highest ratings to daily

assignments, homework, and worksheets (with a mean rating of 6.3). In addition, they gave relatively high ratings to class participation (given a mean rating of 5.7), quizzes (given a mean rating of 5.2) and unit tests they prepared (given a mean rating of 5.1).

All the groups reported that they relied more heavily on unit tests that they themselves prepared than on publisher-prepared unit tests. All teachers gave relatively low ratings to the use of portfolios to assess students' mastery of content (urban teachers giving a mean rating of 2.5; rural teachers giving a mean rating of 2.7; and suburban teachers providing a mean rating of 2.9). In addition, teachers in all groups gave relatively low ratings to the use of research/reaction papers (with mean ratings ranging from 3.2 to 3.7) and textbook/publisher unit tests (with mean ratings ranging from 3.4 to 3.9).

When teachers were asked what factors other than mastery of content were considered when they assigned grades in their course, the highest number of responses of the 142 given related to student effort (31 responses, accounting for 21.8% of the responses), followed by participation and discussion (24 responses, accounting for 16.9% of the responses). Far behind were completion of assignments and attitude/conduct, each awarded 11 mentions and accounting for 7.7% of the responses. No other response was recorded more than six times.

Discussion

The likelihood that general education teachers will be amenable to making changes that will improve the educational outcomes for high school students with disabilities depends on several factors: the time they typically allow for planning class instruction; their goals for student learning; the classroom changes that they believe are necessary; their practices of adapting curriculum; their knowledge of and interest in using research-based instruction, technology, and learning strategies; their use of and confidence in collaboration with other teachers, supports for students, and professional development opportunities; and their opinions and beliefs about factors related to student success and failure in high school general education classes.

The amount of time allotted by teachers for planning instruction establishes one parameter for determining the likelihood that new interventions will be adopted. This raises the question as to the likelihood of a new intervention that requires a great deal of time to prepare being adopted. Teachers reported spending, on average, slightly less than one hour a day at school for planning purposes and the same amount of time each day outside school time. They reported spending about 3 hours each weekend and between seven and nine days each summer. There was little variation among schools in the overall amount of time spent in planning for the targeted course. The amount of planning time reported here raises concerns about the feasibility of teachers taking the time to make significant changes. However, teachers did indicate that, if given extra time, they would spend it planning, although this ranked behind working with students individually or in small groups. Of equal concern are the teachers' reported goals for

student learning. In general, teachers believe that progress is satisfactory when about 50% of the students are mastering at least 50% of the content. This is significant with respect to students with disabilities and low-achieving students without disabilities since they are likely to fall within the 50% who are not mastering 50% of the content.

Teachers also provided information about changes they believed were needed to help students with disabilities and low-achieving students without disabilities. While standards seem to have only a moderate effect on teacher planning, teachers did indicate that changes were needed to ensure that students with disabilities would meet the standards. Although teachers were optimistic that normally achieving students in regular education classes would meet the standards, they were less optimistic that students with disabilities would. Teachers thought that the changes needed to help students with disabilities meet standards included smaller class size, more collaboration and communication with the special education staff, modification of the curriculum, more individual attention to students, the use of a variety of teaching methods, and work with the special education staff. Changes needed to help low-achieving students without disabilities meet standards were similar: the use of a variety of teaching methods and more individual attention to students.

Teachers also appear to be willing to adapt curriculum and make accommodations to improve learning for all students. Their accommodations and adaptations are generally with regard to choice (e.g., tests can be oral). They also reported that they give students extra time and simpler tests. Among rural, urban, and suburban teachers, suburban teachers indicated the greatest willingness to modify and adapt all assessments. All teachers were at least somewhat willing to adapt all kinds of assessments with the exception of rural teachers who indicated they were hesitant about adapting or making accommodations with quizzes and notebooks.

The use of technology to help students with disabilities and low-achieving students without disabilities was reported less frequently than for other students. Ratings seem to indicate that teachers are more likely to use technology in general than to use it for students with disabilities or low achievers. However, the likelihood that they will use technology at all is low. It is also interesting to note the particularly low use of technology reported by urban teachers, who used it only rarely with students with disabilities. Use of the Internet with both groups of students was either infrequent or rare. These findings agree with results compiled from observations conducted in the classrooms, which indicated that computer-based instruction was not seen very often in the classes (Schumaker, Bulgren, Davis, Grossen, Marquis, Deshler, & Lenz, 2002a; Schumaker, Lenz, Bulgren, Davis, Grossen, Marquis, & Deshler, 2002b).

One assessment of teachers' inclination toward improving the educational outcomes for high school students with disabilities is their knowledge of and interest in using research-based instruction. When teachers were asked to list five research-based methods that they used, only

150 responses out of a possible 350 responses were generated. The most frequent response of "cooperative learning" was named 25 times and represents 17% of the responses. The other frequent responses included practices such as group discussions, group activities, and teacher-directed instruction. There are several issues of concern here: the low number of research-based methods named, and the fact that observation data show that teachers were using no research-based programs and only a few research-based methods (Schumaker et al., 2002a; Schumaker et al., 2002b)

Ratings indicated that teachers believed they should very rarely teach content without teaching strategies. In fact, teachers indicated that teaching content and teaching strategies that are focused on how to learn were equally important; this belief was one of the most highly rated beliefs on the questionnaire. Teachers were apparently willing to shoulder both tasks because they were lukewarm in their support for the notion of allowing another teacher to come into their classrooms to teach learning strategies. This unwillingness to allow another teacher to come into the classroom may be part of a general hesitancy toward using and trusting special education services as was indicated when teachers were asked about the likelihood that they would refer students for special education services and their confidence that the services would be beneficial. Although suburban teachers were the most likely group to refer students for special education services and felt that the services would be beneficial, urban teachers indicated that they were less likely to do so and only somewhat confident that services would be beneficial. Rural teachers appeared to be even less likely to refer students and indicated that they were uncertain that referral would be beneficial. In addition, teachers did not indicate confidence that supports outside their courses were adequate to ensure success. Suburban teachers were most confident, but still only slightly confident of that outcome; rural teachers were only somewhat confident, and urban teachers were not confident that supports were adequate. They were even less confident about the support for low-achieving students without disabilities.

These same trends were seen in the responses to questions about the IEP process. While all teachers were aware of the IEP process, not all were involved in the process. Suburban teachers were the most involved, but ratings indicated that these teachers felt that the IEP process had only a slight effect on their planning for teaching. Ratings indicated that rural teachers felt only somewhat involved and felt that the process had no effect on their planning for teaching. Urban teachers' ratings indicated that they felt the least involved; they reported that the IEP process had no impact on their planning. Surprisingly, teachers seemed content with this obvious lack of involvement and reported feeling no need to be more involved in IEP decisions. Despite this finding, teachers in all schools thought that communication with special education teachers would be helpful for the students with disabilities as well as for low-achieving students without disabilities. Even with the knowledge that communication would be beneficial, teachers in all

nine schools reported that they spend between only 12 and 24 minutes each week in collaboration with special education teachers.

Low-achieving students without disabilities appear to be of particular concern for general education teachers. While most teachers in suburban and rural schools indicated that they would like more staff development opportunities related to helping students with disabilities, 26.9% of teachers in rural schools and 36.4% of teachers in suburban schools indicated that they did not want more of this type of development activity. This is significant because of the relative importance of the courses that these teachers are responsible for providing to students earning high school diplomas. Over half of the teachers in the urban schools (52.2%) indicated that they did not want these types of professional development opportunities. These findings, however, must be tempered with results indicating the types of professional development activities that teachers *do* want. All teachers were more enthusiastic about professional development activities that would address the needs of low-achieving students without disabilities. This concern for low-achieving students without disabilities was again emphasized when teachers expressed their belief that students with disabilities were more likely to be successful in life than were low-achieving students without disabilities.

Teachers were asked their opinions about factors that contribute to school failure, in general, for students with disabilities and students without disabilities. With regard to students with disabilities, teachers from all areas named youth goals and attitudes most frequently, followed by youth skills and abilities by urban and suburban teachers and planning opportunities and support by rural teachers. Across all schools, teachers indicated that school-wide structures and policies contributed least to academic failure. Teachers provided other factors contributing to failure in response to an open-ended question. The most frequent responses were lack of effort, low motivation, not enough time to help, and not enough individual attention.

For students without disabilities, youth goals and attitudes and youth skills and abilities were also the most frequently named factors contributing to failure. In response to an open-ended question about factors leading to student failure, teachers named lack of effort and low motivation, as well as family issues and lack of parental support.

For both types of students, greater than 50% of the responses (50.7% for students with disabilities and 68% for students without disabilities) put the responsibility for failure with the students themselves and or the families. Interestingly, the percentages of the responses mentioning teachers as factors leading to student failure were low -- 13% of the responses with regard to the failure of students with disabilities and 6% of the responses with regard to the failure of students without disabilities. Among the responses that mentioned teachers were the follow: teachers do not know about the disability, teachers are inflexible, teachers won't make accommodations, teachers lack training.

These teachers' beliefs are particularly noteworthy when considering the impact they would have on their willingness and enthusiasm to create instructional methods and materials to improve the performance of students with disabilities in general education classes. Teachers who believe that teaching methods and school-wide structures play a minor role in the academic failure of students with disabilities and that youth attitudes and abilities play a major role in student failure are not likely to participate eagerly in research toward the development of new instructional methods, nor are they likely to integrate these methods into their teaching repertoire.

When teachers were asked to describe the three greatest barriers to student success in their courses, poor or counter-productive attitudes and behavior were named most frequently, followed by neglect of work or poor study habits. (Approximately 60% of the responses placed the greatest blame on the students.) The third most frequently named barrier was poor student skills, with a particular emphasis on skills that had not been acquired in prior classes. Lack of teacher time was the fourth most frequently named barrier. Again, the question emerges as to the degree of interest these teachers would have in learning new teaching methods when they rarely attribute student failure in general, or in their classes, as being related to the teaching process.

Teachers indicated that for students without disabilities, success depends to the greatest degree on the ability to demonstrate and manipulate content knowledge and the knowledge and use of basic skills and strategies and success depends to the least degree on the demonstration of transfer and application. The same question was asked relative to students with disabilities, Across all schools, while still considered to be important for success, the expressed degree to which each type of knowledge was important was lower for students with disabilities than it was for students without disabilities. In general, teachers indicated that success for students with disabilities depends to the greatest degree on the demonstration of basic skills and strategies, followed by content knowledge and manipulation of content knowledge. Demonstration of transfer and application was considered just above only "somewhat important" for success. When this area of transfer and application, which represents the highest level of thinking skills among the four types, is compared to the area of basic skills, there is a difference between rural and suburban teachers' rating for students with and without disabilities. For these teachers, the degree to which success for students with and without disabilities depended on basic skills was the same (a mean rating of 6.0 for each group from suburban teachers) or very close (rural teachers gave students without disabilities a mean rating of 5.9 and students with disabilities a mean rating of 6.0). When the ratings for transfer and application are examined, a discrepancy between mean ratings for students with and without disabilities is revealed. For students with disabilities, suburban teachers gave a mean rating of 5.0, and for students without disabilities, they provided a mean rating of 5.7. Mean ratings from rural teachers were 4.9 for students with

disabilities and 5.2 for students without disabilities. Similar discrepancies for all types of schools are found when the ratings related to manipulation of content knowledge are examined.

This area of transfer and application, which represents the highest level of thinking skills among the four types, provided the most striking difference between teachers' ratings for students with and without disabilities.

The teachers' responses indicate that students have deficits, particularly low-achieving students and students with learning disabilities. These students were considered to be slightly deficient in content knowledge, somewhat to moderately deficient in skills and strategies, and moderately deficient in the manipulation, transfer, and application of content knowledge. There was less concern for normally achieving students, but some teachers felt that even these students had some deficits in the higher order thinking required to manipulate content knowledge and in content knowledge and transfer.

In conclusion, contradictions exist at several levels in the high school context within which students with disabilities and low-achieving students without disabilities must succeed. General education teachers believe that collaboration and communication with special education staff is important but they don't have the time to collaborate, are hesitant about another teacher coming into their classroom to teach learning strategies, and want little more to do with the IEP process. General education teachers believe that teaching strategies and teaching content are equally important, but little evidence of strategy instruction was reported. Teachers appear to have a good understanding of the skills necessary for student success; however, they find their low-achieving students and students with disabilities deficient in such skills. These deficiencies lead to failure, failure that is compounded by student attitudes. Attempts to resolve these contradictions are needed to ensure that students with disabilities and low-achieving students without disabilities will succeed in the general education curriculum.

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