# THE EFFECT OF TECHNOLOGY INSTRUCTION ON PRESERVICE TEACHERS' CONFIDENCE TO TEACH SPECIAL LEARNERS

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This study measured the effects of technology instruction on teachers' confidence in their ability to teach students with special needs. The design used was a causal comparative design. One hundred twenty-one preservice teachers completed both a confidence scale and a demographic questionnaire. The confidence scales were sorted into three categories 1) students with no previous technology instruction, 2) students who had been exposed to one class to technology instruction, and 3) students who had been exposed to more than one class of technology instruction. Results indicated that students who had been exposed to more than one class of technology instruction considered themselves significantly more confident to teach exceptional learners than students in either two groups. Also, students who were exposed to more than one class of technology instruction had higher levels of confidence with a greater number of categories of exceptional students.

Few people would dismiss the potential of an integrated system of technology to improve teaching effectiveness. Most studies suggest that if technology is used appropriately, it can enhance learning (U.S. Congress, Office Technology Assessment, 1988; Wiske, 1988). But, what else can technology instruction do to increase the likelihood of positive educational outcomes? It has been reported that using computers can improve a child's self-esteem (Moore 1991; Furst, 1983; Robertson, 1987). However, little research has explored the effects of technology instruction on the personal characteristics of teachers. The only research that has explored the relationship between technology instruction and teachers' attitudes has focused on how technology instruction affects teachers' attitudes toward computers (Madsen & Sebastinani, 1987; McInerney, 1990; Troutman, 1991).

In our society, technology literacy is important. Those people who understand and can use it have an advantage over those who cannot. For those who teacher exceptional students, the need to understand technology is even more vital because technology can provide exceptional learners with a way to communicate, to manipulate the environment and to gain mobility. For that reason, it was hypothesized that if preservice teachers were comfortable with educational technology, they would feel more confident in their ability to teach diverse students.

*The effect of confidence on teaching competence*. Research suggests that by enhancing a teachers's confidence, educators can also influence other aspects of instructional competence. In a recent study, results indicated that confidence levels had a significant effect on other aspects of teaching (Kalaian, 1987). For

example, Kalaian (1987) found that teachers with high levels of confidence:

- reported that teaching was the only career they were considering at the time
- were more positive about the aspects of finding jobs
- were more likely to expect high salaries, advancement opportunities and a positive climate at work
- were more receptive to constructive feedback
- believed that a lesson plan should always be guided by a clear statement of learning expectations
- were more willing to hold teachers accountable for student learning
- believed strongly that students conform to the expectations of teachers,
- believed that knowledge can be made interesting and appealing to everyone
- believed that teachers are obligated to provide necessary remediation
- believed that an important measure of a good teacher is the ability to enhance achievement
- disagreed that most gifted students can be best served in special schools or centers

Developing confidence in one's ability to teach special learners is not only important for special educators, but also for regular education teachers. In recent years, investigators have explored regular education teachers' attitudes toward students with disabilities (Hoover & Mitchell, 1985; Center & Ward, 1987). Center and Ward (1987) conducted a survey that included 2,219 regular education and 332 special education teachers. Their results indicated that teachers' attitudes toward the integration of students with disabilities reflected a lack of confidence both in their own instructional skills and in the quality of support personnel currently provided to them. Also, Larrivee and Cook (1979) surveyed 1000 public school teachers in an attempt to assess attitude toward students with disabilities. They reported that teachers' perceptions of degree of success in dealing with special-needs students had the most significant relationship to teachers' attitudes toward mainstreaming. It is suggested that if technology instruction can influence preservice special education students' attitudes, then technology may also be able to influence regular education teachers' attitudes toward mainstreamed students.

*Effects of technology education on teachers.* Researchers who study the effects of technology education most often focus on how technology affects curricula, teaching style and classroom organization and management (wiske, 1988; Schrum, 1991). As was mentioned before, the only studies that explore the effects of technology instruction on attitude have focused on teachers' attitudes toward technology (madsen & Sebastinani, 1987; McInerney, 1990). In the past, attitude toward computers was an important issue because often teachers were insecure about their ability to use technology. Since it has been, and still is, considered important to use technology effectively in the classroom and to train our children to use technology competently, it was considered a priority to address teachers' fears of the computer. Today education students are more comfortable with technology and college instructors are going beyond simply trying to make preservice teachers comfortable with technology. They are focusing on ways that technology can be used effectively to improve teaching competence.

*Need for enhanced instruction.* It is important to understand the effects of technology instruction on confidence so that policy mangers can make informed decisions about how to develop an effective and integrated technology program. In other words, decision makers not only must understand the need for a comprehensive technology program, they must also decide what constitutes appropriate and useful content, and what methods of presentation effectively prepares teachers to work

with diverse students. Many researchers have reported the need to improve efforts to prepare teachers to use instructional technologies (Semmel, Cosden, Semmel & Keleman, 1984; Gooler, 1989; Bitter & Yohe, 1989; Glen & Carrier, 1989; Brooks & Koff, 1990; Piotrowksi, 1992). In 1988, according to the U.S. Congress, Office of Technology Assessment Survey only half the nations's teachers had ever used a computer. In addition, only 29% of the student-teachers felt prepared to use computers in their classrooms. And beyond simple computer technology, this report suggested that very few teachers could tap the enormous potential of interactive technology. In another article, Brooks and Koff (1990) reported that the area of technology instruction for teachers was often cited by undergraduates and inservice teachers as the part of their preservice education that was least motivating and most detached from the reality of their college curriculum and from practical classroom application. Also, Glen and Carrier (1989) claimed that most preservice teachers only received between 10 to 20 hours of technology training before graduation.

A question remains whether teachers will use technology if better training is available. Crowner (1983) conducted a survey of public school applications of technology in special education. In this study, teachers reported that the two most prevalent reasons why they resisted using computers in the classroom were fear of technology and lack of training. Also in Crowner's report, the number one incentive for teachers to work with microcomputers was once again training.

## Method

*Hypotheses*

The purpose of this study was to determine the relationship between the amount of technology instruction received and levels of confidence in teachers' abilities to work with diverse students. The hypotheses tested include:

1) preservice teachers who have more technology instruction will have more confidence in their ability to teach students with special needs.
2) preservice teachers who have more technology instruction will feel confident with a greater number of categories of exceptional students.

*Subjects*

The participants in this study were graduate-level special education students from two major state universities in California. One hundred and twenty-one students from six different special education classes were asked to complete confidence questionnaires (see Figure 1) and provide demographic information. Forty of these students participated in a pilot study to evaluate the validity and reliability of the measurement instrument.

Eighty-one students participated in the research that explored the effects of technology instructions on teachers. The students in this study were asked to provide information about their previous teaching experience and their level of education. It was assumed that since students were in credential programs, they would have approximately the same amount of experience and education. This assumption was correct only when controlling for level of education. As was mentioned, 88% of the students had already earned a bachelor's degree and a regular education credential and were presently working on a credential in special education. The other 12% of the students were undergraduates who were attending one of the five classes surveyed. This class was analyzed separately. It was found that although some students in this class had less education, their confidence scores reflected the same results that were obtained from the larger group. Therefore, the undergraduate students who completed questionnaires were not excluded from the sample.

Also, students were asked to provide infor-

mation about their previous teaching experience. In this category more variation existed, 54% of the students had experience as teachers in regular education, and 51% had experience in special education. In response to this variation, students were grouped according to their experience. The groups consisted of those students with no experience, those students with no experience in special education and those with 1-5 years of experience in special education. However, a significant difference was found between students with more that five years of experience in special education and both of the other two categories. For this reason, students with more than five years of experience were excluded from the study. For that reason, the total number of subjects "n" was reduced from 81 to 70.

*Study Design and Procedures*

The design used in this study was a casual-comparative design. Three groups of preservice teachers were compared. Confidence scores were grouped according to1) those who had no technology instruction, 2) those who were exposed to only one class of instruction, and 3) those were exposed to more than one class of instruction. Questions on the demographic instrument asked the students to indicate whether they had received technology training (or experience) outside the school setting. None of the students from the first two groups had received technology training outside their teacher education programs.

This study was conducted over the period of 18 months during three semesters. During the first semester, a study was conducted to test the validity and reliability of the measurement instrument. In the second and third semesters, questionnaires were distributed to students in five special education classes during the first few weeks of the semester.

Students who were registered for computer classes were asked to complete questionnaires at the beginning of the semester and at the end of the semester. The pretests and the posttest were identical. After data were collected, results were analyzed. The goal was

Table 1
A comparison of confidence with special needs mean scores in relation to teaching experience.

| Experience | n[a] | M[b] | SD |
|---|---|---|---|
| Regular Education | | | |
| none | 37 | 135.1 | 31.6 |
| 1-5 years | 36 | 133.8 | 29.7 |
| over 5 years | 8 | 137.9 | 32.3 |
| Special Education | | | |
| none | 40 | 127.1 | 31.1 |
| 1-5 years | 30 | 134.9 | 28.8 |
| over 5 years | 11 | 154.8 | 22.1 |

[a]n = number of students
[b]M = average score for each group on confidence scale (highest possible average is 230 and the lowest possible average was 46)

to explore the relationship between the amount of technology instruction received as reported by the students and the level of confidence as measured in the confidence questionnaire.

*Description of instructors in technology courses.* For those students in technology classes who were posttested, attempts were made to determine whether their technology instructors had similar characteristics. Each course was taught by a different instructor. Each instructor had over five years of technology training experience in teacher education, and each instructor received excellent student evaluations at the end of the semester. The technology course instructors were considered comparable in teaching ability. Also, attempts were made to reduce the risk of the posttest being mistaken as teaching evaluations. In each class, the students were told that the final scores on the confidence questionnaires would not reflect positively or negatively on their instructors. In fact, students were told that the instructors would not be allowed to see individual scores or class averages.

*Description of technology courses offered.* As was mentioned before, forty-nine of the 70 subjects were enrolled in either beginning or advanced computer classes. At the end of the semester, posttests were administered to these students to assess their confidence levels after additional exposure to technology instruction. In these classes, the course outline was analyzed for technology instruction content in both the beginning and advanced classes. At the time of this research, the beginning classes surveyed were courses offered through the special education department. Later, the beginning technology classes in special education were combined with the beginning classes in regular education so that students in both departments were being exposed to the same types of techniques and strategies. In the beginning classes, the instructors concentrated on hardware operation, software selection and evaluation, effective teaching strategies, cooperative learning strategies, current uses of technology in education, integration of technology into the curriculum and uses of technology to increase personal productivity. The instructors used a variety of lecture-based, group-based and hands-on activities to teach different concepts. In the advanced class, teachers concentrated on providing experiences with various adaptive hardware and software, taught students how to use technology to facilitate inclusion, explained strategies for interactions with regular educators and helped students develop effective teaching strategies for using technology as a tool in the education of learners with special needs. Also, once again, the teachers used a variety of lectured based, group-based and hands-on activities to teach the concepts presented.

*Measurement Instrument*

Since a suitable measurement instrument was not found prior to this study, a confidence scale was developed as part of this research project. It is important to emphasize that the confidence that is being examined here in not only confidence with technology (as is measured in most studies). The confidence measured here was a generic confidence to teach special needs students. Therefore that measurement instrument overall confidence in many areas of teaching special learners. The test that was employed to measure the teachers' confidence is called the Special Needs Confidence Scale (see Figure 1). This confidence inventory used a five point Likert scale to assess preservice teachers' confidence in their ability to teach exceptional students. This scale consisted of 46 items that measured overall confidence when teaching special learners, as opposed to other scales that simply measure teachers' confidence with technology. A few examples of the first 22 questions from this instrument include, 1) I am confident that I can develop materials that will meet the needs of special students, 2) I am confident that I can

use different media to enhance individual learning styles, 3) I am confident that I can adapt a learning environment so that special needs students can participate, 4) I feel confident that I can write meaningful and appropriate educational goals, 5) I feel confident that I can provide accurate information to parents about opportunities for their children.

The last 24 questions in the Special Needs Confidence Scale asks students to rate how confident they are to teach students who face different types of barriers such as hearing impairments, physical disabilities, speech problems or cultural differences (see Figure 1).

Steps were taken to measure the validity and reliability of this confidence scale. First, a panel of three experts were asked to review this questionnaire for content validity. Professors and colleagues involved in technology instruction for special educators were asked to determine whether the questions were appropriate and clear and whether content areas were covered adequately.

To determine whether the questionnaire accurately measured confidence, this instrument was compared to a similar questionnaire called the Comfortability Scale (Norlander & Reich, 1984). The Comfortability Scale was also a Likert scale that measured teachers' attitudes toward perceived competence or comfortableness with a variety of issues and practices in the field of special education. However, it did not ask how confident students were with different populations. Norlander and Reich conducted tests of validity and reliability on this instrument. They used factor analysis to determine construct validly, and they used alpha coefficients to test for reliability. The reliability for there instrument was determined to be .97.

In the current project, 40 students were given both the Comfortability Scale and Confidence Questionnaire. Scores from the Confidence questionnaire and the Comfortability scale were compared using a Pearson product-moment correlation coefficient. These scores correlated at .82.

A split half reliability measure was also used to check the internal consistency of the Confidence Inventory. Related questions were paired together and then compared using a Pearson product-moment correlation coefficient. The internal reliability was .95.

**Results**

After the confidence scales were separated into three categories (no experience, one class of technology instruction and more than one class of instruction), the three groups were then compared using an anova (see Table 2 below). Overall confidence was determined first for each student, and then for each group. Since there were 46 questions in the confidence questionnaire, if a student marked his or her confidence level for each question at five, the highest score possible was 230. The lowest confidence score possible was 46. After a score was calculated for each student, a group average was computed.

The result of the anova was significant at the .01. Post hoc comparisons were then conducted to compare each pair. The first hypothesis was partially supported. It was expected that as students received more technology instruction, their confidence with special needs students would increase proportionally. Results indicated that students who had more than one class of technology instruction had significantly higher confidence levels than those students who had no instruction or those who were exposed to only one class of instruction. But, although there was a slight increase, students who had one class of instruction had confidence levels similar to those students with no instruction (see Table 2 below).

To provide additional evidence of the effect of technology instruction on confidence, pretest scores were compared to posttests scores for students registered in computer classes (see Table 3 below). Results indicated that in each

Table 2
A comparison of confidence with special needs mean scores to the amount of technology instruction received

| Source of Variance | SS | DF | MS | F |
|---|---|---|---|---|
| Between | 10667.43 | 2 | 5333.7 | 5.87** |
| Within | 60889.67 | 67 | 908.8 | |
| Total | 71557.1 | 69 | | |

**p<.01

Summary of Scheffe'Contrasts of Between Factors Comparison

| Contrasts | n[a] | M[b] | F |
|---|---|---|---|
| No technology education | 29 | 125.3 | |
| One class of technology edu. | 27 | 131.6 | .30 |
| More than one class of tech. | 14 | 158.3 | |
| One class of technology edu. | 27 | 131.5 | 3.65* |
| No Technology education | 29 | 125.3 | |
| More than one class of tech. | 14 | 158.3 | 5.70** |

[a]n=number of students
[b]M=average score for each group on confidence scale (Highest possible average is 230 and the lowest possible average was 46)

*p<.05
**p<.01

class, students' confidence levels increased significantly.

Finally, it was hypothesized that students with more technology instruction would be more confident with a greater number of categories of exceptional students. This hypothesis was supported. Students who had more than one class of technology instruction scored high in 8 of the 12 categories of special populations listed (see Table 4). In the four remaining categories, (Learning handicapped, regular education, autistic, and seriously emotionally disturbed) scores were similar in all groups. This hypothesis was test using the last 24 questions on the confidence questionnaire. These questions allowed students to rate their confidence for each of 12 different populations (see Figure 1). Two questions were designed to measure students confidence with each population. One question asked students to rate their knowledge about current teaching methods and strategies; the second question asked students

Table 3
A comparison of the pretest and posttest confidence with special need scores for students enrolled in technology courses

| | *Pretest* | | | *Posttest* | | | | |
|---|---|---|---|---|---|---|---|---|
| *Technology classes* | *n*[a] | *M*[b] | *SD* | *n*[a] | *M*[b] | *SD* | *df* | *t* |
| Class 1--Beginners | 18 | 137 | 30.6 | 15 | 162.2 | 26.6 | 30 | 2.53** |
| Class 2--Beginners | 21 | 126 | 30.9 | 17 | 170.5 | 23.6 | 35 | 5.03** |
| Class 3--Advanced | 10 | 141 | 32.5 | 9 | 165.9 | 34.3 | 14 | 1.62* |

[a]n = number of students
[b]M = average score for each group on confidence scale (highest possible average is 230 and the lowest possible average was 46)

**p<.01
*p<.10

to rate their confidence in their ability to teach these students generally. These two questions were designed to measure similar, if not the same, area of confidence. During reliability testing, these questions correlated at .96. Scores from each of the two questions were averaged together and listed in Table 4.

Results indicated that people who had more than one class of technology instruction felt comfortable with a greater number of special populations. Once again, a significant difference did not exist between the students who had no experience and students exposed to only one technology class. The results of this subcategory upheld the conclusions reported from the anova.

*Limitations of the study*

One limitation of this study was that it was based on self-report data. Therefore, it cannot be concluded that teachers are more or less confident with students according to their level of confidence. The results of the study suggest that preservice teachers believe they are more confident when they have more technology instruction. Although the validity and reliability of the measurement instrument were calculated, whenever self-report data is collected, researchers must report problems associated with this type of data collection. Listed below are examples of problems associated with self-report data:

- people often remember only the traumatic
- people color the truth to make themselves look better
- people forget important information
- people have trouble remembering information accurately.
- people give different testimony depending upon the interviewer, the time of the interview and the environment.

It is also important to mention that although this study reported a difference in confidence levels in relation to amount to technology education received, we do not explore what types of technology education is most useful. Although there is some evidence from this study that exposing teachers to adaptive tech-

Table 4
Average confidence scores from two questions on a 5 point scale (1 lowest and 5 highest) for each population in relation to technology instruction received.

| Disability populations | no technology training (n=29) | one class of training (n=27) | more than one class (n=14) |
|---|---|---|---|
| physically challenged | 2.05 | 1.96 | 3.34 |
| severely handicapped | 1.63 | 1.96 | 2.41 |
| developmentally disabled | 2.52 | 2.04 | 2.88 |
| hearing impaired | 1.73 | 1.83 | 2.97 |
| visually handicapped | 1.77 | 1.97 | 3.22 |
| communicably handicapped | 2.11 | 1.82 | 3.22 |
| autistic | 1.79 | 1.63 | 1.69 |
| seriously emotionally disturbed | 1.89 | 2.50 | 1.88 |
| learning handicapped | 3.25 | 3.07 | 3.25 |
| at-risk | 2.45 | 2.68 | 3.00 |
| culturally diverse | 2.84 | 3.54 | 3.75 |
| regular education | 3.95 | 3.44 | 3.75 |

nologies may improve confidence, detailed descriptions of the types of technology education these preservice teachers was not available. For further studies, it is suggested that researchers determine what types of technology instruction has the greatest impact on confidence levels. This would provide more information for curriculum designers.

**Discussion**

In this study, results indicated that students who had more than one class of technology instruction had more confidence in their ability to teach special learners. However, students who only had one class of technology instruction had confidence levels similar to those people with no instruction. These results suggest that technology does affect confidence, but only after students become comfortable with technology or are exposed to classes that teach advanced concepts. The results indicate that one introductory computer class may not provide the amount of training necessary to affect confidence levels.

The results from this study also indicate that students with higher levels of technology instruction were more confident with a greater number of disability populations. In fact, those students who had more than one class of technology instruction scored higher in 8 of 12 population categories listed. Furthermore, people who reported higher levels of technology instruction were most confident with students who were culturally diverse, communicatively handicapped, physically challenged, severely handicapped, hearing impaired and visually handicapped. One possible explanation for this finding is that preservice teachers might recognize the benefits of technology when it is used for adaptive access and environmental control, but not when it is used for teaching and learning. The fact that confidence levels were consistent under other categories of students who do not always use adaptive devices, such as learn-

ing disabled, autistic, seriously emotionally disturbed and regular education, would suggest that teachers may not have as much faith in the benefits of using technology as a teaching tool.

Finally, for future studies, it is suggested that researchers explore what types of technology education affect confidence levels. In this study, there is some evidence that demonstrating adaptive technologies may have more affect on confidence than demonstrating how to use technology as a learning tool. Also, it is suggested for future studies that the confidence gains in technology courses be compared to confidence gains in other courses. In this study, it was not possible to posttest students who were not registered in technology classes. Most professors would hope that their students' confidence would improve each time a student learns new information about a field. In reality however, this does not always happen. For example, Buttery (1981) found that students' affective perceptions toward selected categories of mainstreamed children took a negative shift as a result of exposure to mainstreaming information. Also, Guskey (1982) found that although there were many positive outcomes, confidence in teaching ability decreased after teachers were exposed to an inservice workshop on Mastery Learning. Also, in this study, although it is counter-intuitive, it seems that teachers did not gain confidence in their ability to address special needs after they had acquired experience in regular education and even in special education during the first five years.

The authors of this article intend for the results of this study to assist policy managers and instructors when making decisions about technology-related curriculum. This study supports the position that technology instruction should be integrated into preservice as well as teacher inservice programs beyond simple introductory courses. One solution is to provide advanced technology courses. Another solution is to integrate technology instruction into other content area classes. For example, class sessions may be devoted to CAI and CD-ROM reading materials in a methods course on language arts. Also, technology applications could be included in an introductory course on physical disabilities, illustrating how technology has opened up opportunities for individuals who have limited movement.

The results in this study also indicate that professors should know that preservice teachers appear to understand the benefits of using technology as adaptive aides (e.g. communication devices and environmental control), but they may not recognize the benefits of using technology as a teaching tool (e.g., software for teaching reading, writing and math). Also, the results of this study suggest that it would be beneficial for regular education preservice teachers to be exposed to special education technology since many will work with mainstreamed students in the future. In sum, the results of this study indicate that technology instruction can affect more than just a teacher's ability to use computers for instructional purposes, it can affect teachers' confidence in their ability to teach diverse students.

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Figure 1
Special Needs Confidence Scale
Circle the number on the scale which most accurately reflects you relative confidence with the issues listed below. (#1 represents the lowest level of confidence and #5 represents the highest level of confidence)

| | | Least | | | | Most |
|---|---|---|---|---|---|---|
| 1. | I feel confident in my ability to teach students with disabilities. | 1 | 2 | 3 | 4 | 5 |
| 2. | I feel confident that I can develop materials that will meet the needs of special students. | 1 | 2 | 3 | 4 | 5 |
| 3. | I feel confident that I can use different media to enhance individual learning styles. | 1 | 2 | 3 | 4 | 5 |
| 4. | I have a large repertoire of teaching strategies that assist my teaching efforts with diverse styles. | 1 | 2 | 3 | 4 | 5 |
| 5. | I feel confident that I can write meaningful and appropriate educational goals. | 1 | 2 | 3 | 4 | 5 |
| 6. | I feel confident that I can provide my students with opportunities for success. | 1 | 2 | 3 | 4 | 5 |
| 7. | I am confident that I can adapt a learning environment so that special needs students can participate. | 1 | 2 | 3 | 4 | 5 |
| 8. | I feel comfortable with the terminology used in special education. | 1 | 2 | 3 | 4 | 5 |
| 9. | I know what types of assessment instruments are available. | 1 | 2 | 3 | 4 | 5 |
| 10. | I feel confident that I can implement assessment procedures. | 1 | 2 | 3 | 4 | 5 |
| 11. | I feel confident that I can adapt materials to meet the needs of students with different learning speeds. | 1 | 2 | 3 | 4 | 5 |
| 12. | I feel confident that I can accurately evaluate the effects of instruction. | 1 | 2 | 3 | 4 | 5 |
| 13. | I feel confident that I can use new technologies with special needs students to enhance classroom participation and instruction. | 1 | 2 | 3 | 4 | 5 |
| 14. | I feel confident that I can use new assistive technologies to help students adapt their environment. | 1 | 2 | 3 | 4 | 5 |
| 15. | I feel confident that I can create a cooperative classroom environment. | 1 | 2 | 3 | 4 | 5 |
| 16. | I feel confident that I can make a change in my student's academic achievement level. | 1 | 2 | 3 | 4 | 5 |
| 17. | I feel confident that I can make a student more competent. | 1 | 2 | 3 | 4 | 5 |
| 18. | I feel confident that I can make a student more productive. | 1 | 2 | 3 | 4 | 5 |
| 19. | I am confident that I can make a change in a student's quality of life. | 1 | 2 | 3 | 4 | 5 |
| 20. | I am confident that I can make a positive change in a student's self-esteem. | 1 | 2 | 3 | 4 | 5 |

(continued on next page)

Figure 1 (Cont.)
Special Needs Confidence Scale
Circle the number on the scale which most accurately reflects you relative confidence with the issues listed below. (#1 represents the lowest level of confidence and #5 represents the highest level of confidence)

| | | | | | |
|---|---|---|---|---|---|
| 21. I am confident that I can provide accurate information to parents about opportunities for their children. | 1 | 2 | 3 | 4 | 5 |
| 22. I feel confident when evaluating the effectiveness of educational media for special needs students. | 1 | 2 | 3 | 4 | 5 |

*I know current teaching methods and strategies for working with students who are:*

| | | | | | |
|---|---|---|---|---|---|
| 23. physically challenged | 1 | 2 | 3 | 4 | 5 |
| 24. severely handicapped | 1 | 2 | 3 | 4 | 5 |
| 25. developmentally disabled | 1 | 2 | 3 | 4 | 5 |
| 26. hearing impaired | 1 | 2 | 3 | 4 | 5 |
| 27. visually handicapped | 1 | 2 | 3 | 4 | 5 |
| 28. speech disabled | 1 | 2 | 3 | 4 | 5 |
| 29. autistic | 1 | 2 | 3 | 4 | 5 |
| 30. seriously emotional disabled | 1 | 2 | 3 | 4 | 5 |
| 31. learning handicapped | 1 | 2 | 3 | 4 | 5 |
| 32. at-risk | 1 | 2 | 3 | 4 | 5 |
| 33. culturally diverse | 1 | 2 | 3 | 4 | 5 |
| 34. regular education | 1 | 2 | 3 | 4 | 5 |

*I am confident that I can effectively teach students who are:*

| | | | | | |
|---|---|---|---|---|---|
| 35. physically challenged | 1 | 2 | 3 | 4 | 5 |
| 36. severely handicapped | 1 | 2 | 3 | 4 | 5 |
| 37. developmentally disabled | 1 | 2 | 3 | 4 | 5 |
| 38. hearing impaired | 1 | 2 | 3 | 4 | 5 |
| 39. visually handicapped | 1 | 2 | 3 | 4 | 5 |
| 40. speech disabled | 1 | 2 | 3 | 4 | 5 |
| 41. autistic | 1 | 2 | 3 | 4 | 5 |
| 42. seriously emotional disabled | 1 | 2 | 3 | 4 | 5 |
| 43. learning handicapped | 1 | 2 | 3 | 4 | 5 |
| 44. at-risk | 1 | 2 | 3 | 4 | 5 |
| 45. culturally diverse | 1 | 2 | 3 | 4 | 5 |
| 46. regular education | 1 | 2 | 3 | 4 | 5 |