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Preservice Teachers' Perceptions of Including Students with Disabilities

Margaret E. Shippen, Steven A. Crites, David E. Houchins, Michelle L. Ramsey, & Marsha Simon

Abstract: *The purpose of this study was to compare the perceptions of future educators on two dichotomous scales (i.e., hostility/receptivity and anxiety/calmness) regarding serving students with disabilities in general education settings. Graduate and undergraduate preservice teachers (n = 326) from three universities completed the Preservice Inclusion Survey (PSIS) during the first and last class sessions of enrollment in a survey of exceptionalities course. The results of this study have implications for future teachers' acceptance and disposition in serving students with disabilities in general classrooms. Participants in a survey of exceptionalities course significantly decreased their level of anxiety and hostility toward serving students with disabilities in general education settings. More research is needed to define disposition toward serving students with disabilities.*

General and special education services have historically been provided in two different educational settings employing different instructional strategies. Increasingly, general education and special education teachers are providing services for students with disabilities in general education classrooms (Pugach, 1988; Murawski & Swanson, 2001). This increase is a direct result of the Individuals with Disabilities Education Act of 1997 (IDEA, 1997). IDEA mandated that the first educational placement consideration for students with disabilities should be the general education classroom. IDEA elevated general education as the primary placement option for the delivery of special education services, when appropriate. This requirement directly questioned the existence of a dual system of education and required a justification for any exclusionary programs for students with disabilities (Zollers, Ramanathan & Moonset, 1999).

As a result of changes in the educational service delivery paradigm, teacher preparation programs must now consider how to better train preservice teachers, both general and special educators, in the necessary strategies to serve students with disabilities in general classrooms. Previous research has indicated that preservice teachers do not feel adequately prepared to serve students with disabilities in general education classrooms (Goodlad & Field, 1993; Jobling & Moni, 2004; Kirk, 1998; Rojewski & Pollard, 1990; Welch, 1996).

For example, Goodlad and Field (1993) conducted a study, in which university personnel, school district personnel, and preservice teachers were interviewed regarding their perceptions of serving students with disabil-

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ities in general classes. The results of the Goodlad and Field investigation indicated that general educators view themselves as insufficiently prepared to teach student with disabilities. Similarly, Rojewksi and Pollard (1990) reported that in a national survey of secondary teachers, 90% of the respondents indicated that their undergraduate program did not effectively prepare them to skillfully teach students with disabilities.

Research on preservice teachers' perceptions of including students with disabilities has been mixed (Campbell, Gilmore, & Cuskelly, 2003; Garriott, Miller, & Snyder, 2003; Jobling & Moni, 2004; Kirk, 1998). Both Campbell et al. and Garriott et al. reported that preservice teachers' attitudes toward including students with disabilities were more positive following university coursework. However, Kirk examined the link between university coursework and preservice teachers' attitudes toward students with disabilities and found that coursework did not increase positive attitudes or a willingness to work with students with disabilities. These mixed findings appear problematic in light of the mandated increase in the placement of students with disabilities in inclusive classes.

Moreover, teacher preparation programs have not reformed the training process in order to meet the needs of future teachers in serving students with disabilities (Welch, 1996). A primary area of teacher training that would support students with disabilities in general classrooms is collaboration between general and special educators (Friend & Bursuck, 1999). In order for general and special educators to collaborate and work together to serve students with disabilities in general classrooms, teacher preparation programs must provide instruction in this area. Hudson and Glomb (1997) in the title of their article asked this metaphorical question about collaborative skills training in preservice education programs, "If it takes two to tango, why not teach both partners to dance?"

The inconsistency between teacher preparation programs and positive teacher perception of students with disabilities may require reform in teacher preparation programs including extensive training in collaboration (Hudson & Glomb, 1997). New teachers must be trained in research-validated practices as well as effective collaborative skills. Measuring the perceptions that preservice teachers bring to the classroom about students with disabilities is a starting point for designing curricula that prepares them to provide effective instruction to students with disabilities in inclusive settings (Jobling & Moni, 2004). Further, teachers' perceptions of the learning and behavioral characteristics of students with disabilities appear to mediate teacher behavior and may influence classroom learning and dynamics and may also be an indicator of teacher disposition (Lago-Delello, 1998; Vaughn, Klingner & Hughes, 2000).

Method

The purpose of this study was to compare the perceptions of future educators on two dichotomous scales (i.e., hostility/receptivity and anxiety/calmness) regarding serving students with disabilities in general education settings before and after the completion of an introductory course in special education. Additionally, a confirmatory factor analysis was conducted on the Preservice Inclusion Survey (*PSIS*) that is a modified version of the Response to Inclusion Survey (Soodak, Podell, & Lehman, 1998) to determine if the *PSIS* maintains the original two-factor structure in its modified form.

Participants

Preservice graduate and undergraduate students (n = 326) enrolled in survey of exceptionality courses at three universities were recruited to complete a pre/post instruction survey. Two of the universities were located in the southeastern United States and the third was located in the midatlantic region of United States. Participant demographics include 29% (n = 96) as future special educators, 46% (n = 149) as future general educators, 21% (n = 68) as future dually certified in both special education and general education, and 4% (n = 13) did not respond to this item. Class rankings included 3% (n = 8) as freshmen, 16% (n = 52) as sophomores, 17% (n = 54) as juniors, 11% (n = 37) as seniors, 51% (n = 165) as post-

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baccalaureate or graduate level preservice educators, and 3% (n = 10) did not respond to this item. Gender demographics were 23% (n = 75) male, 75% (n = 244) female, and 2% (n = 7) did not respond to this item.

Survey Instrument

Each participant anonymously completed the Preservice *Inclusion Survey* (*PSIS*) (Adapted from Soodak, Podell, & Lehman, 1998; See appendix A). The survey consisted of a one-paragraph hypothetical scenario regarding serving students with disabilities in inclusive classes. The students with disabilities described in a hypothetical scenario were identified as having hearing impairments, learning disabilities, mental retardation, behavioral disorders, or physical disabilities requiring the use of a wheelchair. The scenario was followed by a list of 17 adjectives that were rated on a 5-point Likert-type scale delineated as negative, somewhat negative, neutral, somewhat positive and positive feelings toward the scenario. The items were counterbalanced with positive and negative variations.

Procedures

The *PSIS* was distributed and completed by education majors enrolled in a survey of exceptionalities course at three universities during the first and last class sessions of the semester. The last session was chosen as post-test measurement period to ensure that the participants had been exposed to materials and information pertinent to all the exceptionalities discussed in the scenario. Therefore, by the end of the course the participants would have been familiar with the characteristics, causations, and interventions for students with hearing impairments, learning disabilities, mental retardation, behavioral disorders, or physical disabilities requiring the use of a wheelchair.

Data Analysis

The statistical analysis of the data included a test-retest reliability analysis, a content validity analysis, a confirmatory factor analysis and a repeated measures multivariate

Table 1. Means and (Standard Deviations) for Total *PSIS*

Area Measured (n = 326)	Pre Mean	Post Mean
Overall	3.32 (.60)	3.68 (.59)
Anxiety/Calmness	2.73 (.70)	3.18 (.70)
Hostility/Receptivity	3.70 (.68)	3.99 (.68)

analysis of variance (MANOVA). The purpose of the confirmatory factor analysis was to validate the exploratory factorial findings of Soodak et al. (1998). The MANOVA was selected because as Stevens (1996, p.250) points out that "in repeated measures designs. . .variability among the subjects due to individual differences is completely removed. . .. This makes these designs much more powerful than completely randomized designs. . .." A 2 × 2 within-subject analysis was conducted with the factor being time (pre and post) and the dependent measures being (a) hostility/receptivity and (b) anxiety/calmness by teacher type (future general vs. future special educator), gender, and class rank (graduate vs. undergraduate).

Results

The results of the MANOVA indicated a significant within subject main effect for time (Wilks' lambda Λ = .71, $F(3, 323)$ = 43.36, $p<.01$). The univariate tests associated with the Time main effect were highly significant for the overall survey as well the two subscales, hostility/receptivity and anxiety/calmness ($p < .01$). The results of the MANOVA indicated a significant difference between subject effect for teacher type (Wilks' lambda Λ = .90, $F(6, 592)$ = 5.57, $p < .01$) and a significant between subject effect for gender (Wilks' lambda Λ = 96, $F(3, 296)$ = 3.64, $p < .05$). However, the MANOVA tests yielded no significance for class ranking. The means and standard deviations for the dependent measures are presented in Table 1–3 by overall participants, gender, and teacher type.

Results of the 3-week test-retest reliability analysis yielded a reliability coefficient for the hostility/receptivity subscale of .93, while the reliability coefficient for the anxiety/

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Table 2. Means and (Standard Deviations) by Gender

Gender	Pre Overall	Post Overall	Pre Hostility/ Receptivity	Post Hostility/ Receptivity	Pre Anxiety/ Calmness	Post Anxiety/ Calmness
Male	3.45 (.56)	3.81 (.62)	3.76 (.59)	4.10 (.77)	2.96 (.73)	3.34 (.72)
Female	3.29 (.61)	3.64 (.58)	3.69 (.71)	3.97 (.66)	2.67 (.68)	3.14 (.69)

calmness subscale was .91. The reliability coefficient for the entire instrument was .96.

A content validity analysis was conducted by three experts in the field of special education. The expert reviewers rated each of the 17 items on the *PSIS* as relevant, somewhat relevant, or irrelevant. The ratings were assigned a Likert type range of 1 to 3 (e.g., 1 = irrelevant, 2 = somewhat relevant, and 3 = relevant). The mean score for seven of the 17 items was 3.00 indicating that all three reviewers rated these items as relevant. For six of the 17 items the mean score was 2.67. For three of the 17 items the mean was 2.33 and for one item the mean score was 1.33. See Table 5 for reviewers' content validity analysis by item.

The confirmatory factor analysis yielded a two-factor structure and accounted for 45% of the variance in participant responses. The two-factors were confirmed by principal components extraction and varimax rotation (see Table 4). The first confirmatory factor structure (hostility/receptivity) heavily loaded on adjective pairs such as enthusiastic/unenthusiastic, angry/not angry, willing/unwilling, and cooperative/resistant. The second confirmatory factor structure (anxiety/calmness) heavily loaded on adjective pairs such as fearless/scared, relaxed/anxious, calm/nervous, and insecure/confident.

No attitude differences were indicated between graduate and undergraduate teacher candidates overall. Some differences were

noted between teacher type (i.e., future general educators, future special educators, dually certified educators).

Discussion

The purpose of this study was to compare the perceptions of future educators, before and after an introductory course in special education, on two dichotomous scales (i.e., hostility/receptivity and anxiety/calmness) regarding serving students with disabilities in general education settings. In addition, a confirmatory factor analysis was conducted on the *PSIS* (i.e., a modified version of the Response to Inclusion Survey) to determine if the *PSIS* maintained the original factor structure in its modified form. Results of the confirmatory factor analysis indicated the same two-factor structure as reported by Soodak et al. In the current study, the two factors accounted for 45% of the variance. This is similar to the findings of Soodak et al., who found the two factors accounted for 52.9% of the variance. An examination of the factor loadings for each response set is very similar. The *PSIS* used in this study indeed maintained the same factor structure as the original Response to Inclusion Survey (Soodak, Podell, & Lehman, 1998).

The first factor structure (hostility/receptivity) included response pairs such as enthusiastic/unenthusiastic, angry/not angry, willing/unwilling, and cooperative/resistant and

Table 3. Means and (Standard Deviations) by Teacher Type

Teacher Type	Pre Overall	Post Overall	Pre Hostility/ Receptivity	Post Hostility/ Receptivity	Pre Anxiety/ Calmness	Post Anxiety/ Calmness
Future Special Educator	3.41 (.58)	3.72 (.59)	3.73 (.70)	4.04 (.67)	2.87 (.62)	3.20 (.59)
Future General Educator	3.19 (.61)	3.55 (.60)	3.60 (.71)	3.86 (.67)	2.56 (.69)	3.10 (.79)
Dual Certification	3.54 (.53)	3.92 (.52)	3.93 (.57)	4.27 (.69)	2.97 (.74)	3.37 (.65)

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Table 4. Factor Analysis of *PSIS*

Adjective Pair	Factor 1 Hostility/Receptivity	Factor 2 Anxiety/Calmness
Enthusiastic/Unenthusiastic	.69	
Fearless/Scared		.75
Relaxed/Anxious		.67
Comfortable/Uncomfortable		.57
Not Angry/Angry	.59	
Willing/Unwilling	.64	
Interested/Disinterested	.62	
Confident/Insecure		.59
Calm/Nervous		.73
Pleased/Displeased	.73	
Powerful/Weak		.54
Indifferent/Annoyed	.53	
Accepting/Opposing	.72	
Prepared/Unprepared		.49
Cooperative/Resistant	.62	
Happy/Unhappy	.74	
Optimistic/Pessimistic	.64	

referred to the teacher's enthusiasm toward being told he/she would be teaching students with disabilities in his/her classroom (Soodak et al., 1998). On this factor, an examination of the mean differences for future special educators and future general educators indicated both groups became slightly more receptive to the idea of inclusion with future special educators more receptive than future general educators (+.31 and +.26 respectively).

Table 5. Content Validity Analysis of the *PSIS* by Item

Adjective Pair	Content Validity Mean by Item
Enthusiastic/Unenthusiastic	2.67
Fearless/Scared	2.67
Relaxed/Anxious	3.00
Comfortable/Uncomfortable	2.67
Not Angry/Angry	3.00
Willing/Unwilling	3.00
Interested/Disinterested	2.33
Confident/Insecure	3.00
Calm/Nervous	3.00
Pleased/Displeased	2.67
Powerful/Weak	1.33
Indifferent/Annoyed	2.33
Accepting/Opposing	3.00
Prepared/Unprepared	3.00
Cooperative/Resistant	2.67
Happy/Unhappy	2.67
Optimisitic/Pessimistic	2.33

This slight shift in attitude may be due to the students learning about inclusion and the fact that the Individuals with Disabilities Education Act of 1997 strengthens the idea that students with disabilities should be educated in the least restrictive environment with their peers without disabilities to the greatest extent possible (i.e., the general education classroom). Knowledge of this mandate may have lessened the hostility, though there is still considerable resistance on the part of future general education teachers as their attitude did not move much beyond the "neutral" category. These findings are not consistent with the findings of Kirk (1998) who found that coursework did not increase the willingness to work with students with disabilities.

Although the candidates were exposed to the idea of collaboration in the course, increasing the focus on collaborative techniques and the importance of collaboration between general and special educators may have a greater influence on attitudes on this factor (hostility/receptivity). Teacher candidates (both general and special education) need more information about collaboration, teaming, and role release.

The second confirmatory factor structure (anxiety/calmness) heavily loaded on adjective pairs such as fearless/scared, relaxed/anxious, comfortable/uncomfortable, confident/

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insecure, and prepared/unprepared. These descriptors referred to the level of tension felt by the teachers when they are told they will be including students with disabilities in their classrooms (Soodak et al., 1998). Unlike the hostility/receptivity factor, the anxiety/calmness factor is more of an emotional reaction to the students with disabilities themselves. An examination of the mean increase of the anxiety/calmness factor revealed that general educators showed the largest increase (+.54), followed by those seeking dual certification (+.40), and future special educators (+.33).

It appears that while future general educators still had the highest level of anxiety about including students with disabilities, the information provided in the course (e.g., the nature and needs of students with disabilities) had a greater calming effect on them when compared to the other two groups. The increased level of knowledge about special education students made them less anxious about including students with disabilities in their classrooms. If general education teachers are less anxious about including students with disabilities, inclusion is more likely to be successful.

Another component that could be added to an introductory special education course is a field experience in special education. This hands-on field experience would allow teacher candidates to interact with actual individuals with disabilities, bringing to life the nature and needs discussions. Field experience combined with course work may greatly enhance the calming effect on all teacher candidates.

Overall, the findings of this study are consistent with Shade and Stewart (2001). These investigators found an introductory course in exceptionality significantly changed the attitudes of both future general and future special educators. Another interesting finding of the current study was the fact that those individuals seeking dual certification were more receptive and less anxious than the other two groups both before and after the exceptionality course. This more receptive and less anxious attitude may be a result of training in both general and special education. These individuals may have a better understanding of the requirements of teaching students with and without disabilities having come to the training program with the intent of working with both populations.

These findings suggest that dual training in both general and special education may produce classroom teachers who are more capable and willing to serve students with disabilities in the general education classroom. As the number of students with disabilities included in the general education classroom continues to grow, both preservice and inservice training programs for general and special educators must include cross training and coursework in collaboration.

Both the Interstate New Teacher Assessment and Support Consortium (INTASC) and the National Council for Accreditation of Teacher Education (NCATE) have developed standards for beginning teacher candidates with emphasis on performance outcomes. Those outcomes include evidence of knowledge, skills, and dispositions. An excerpt from NCATE standards that clearly addresses the need for all teacher candidates to competently work with all students:

> *Candidate Knowledge, Skills, and Dispositions.* Candidates preparing to work in schools as teachers or other professional school personnel know and demonstrate the content, pedagogical, and professional knowledge, skills, and dispositions necessary to help all students learn. Assessments indicate that candidates meet professional, state, and institutional standards (as cited in Bradley, 2000, p. 2).

Both the factors hostility/receptivity and anxiety/calmness are directly related to the dispositions of future teachers. Teacher candidates are now required to demonstrate the dispositions necessary to help all students learn, including students with disabilities in their classrooms. College course work and field experiences must address deficits in knowledge and skills as well as focus on helping teacher candidates to develop dispositions that would enhance the education of students with disabilities in the general education classroom.

Limitations and Suggestions for Future Research

Results of the current study do have limitations. The sample came from only two

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geographical regions of the country (i.e., mid-Atlantic region and southeast region) and results may not be representative of the whole country. Also, while the factor structure was confirmed in the current study, the psychometric properties of the *PSIS* were first examined in this study and may need further analysis.

An area for continued examination is the perceptions of future and practicing educators related to collaborative and co-teaching models. For example the scenario offered by the current *PSIS* could be modified to reflect such a foundation and measure a respondent's hostility/receptivity and anxiety/calmness toward models of inclusion.

Examining disability specific perspective may also be worthy of investigation. That is,modifying the *PSIS* scenario to be disability specific to elicit the levels of hostility/receptivity and anxiety/calmness of educators toward including students who are eligible for services in specific disabilities categories (e.g., behavior disorders, mental retardation, orthopedic impairments, etc.).

As teacher certification requirements change to address new mandates such as No Child Left Behind (2001), and teacher education programs shift to a more performance-based evaluation approach of teacher candidates, adjustments in the college curriculum will need to be made. Continuing research will be needed to measure the impact of redesigned teacher training programs on the attitude of teachers toward inclusion.

Appendix   Preservice Inclusion Survey (*PSIS*)

Circle the word that best describes your feelings after reading the following scenario. The administrator of your school calls you in for a conference two weeks before school is out. He/She informs you that next year the school will make an effort to include students with disabilities in general classes as often as appropriate. The special education teacher is also in attendance at this conference and he/she is hearing this information for the first time, too. The administrator goes on to say that the students with disabilities that will be in your class have identified exceptionalities in the areas of hearing impairment, learning disabilities, mental retardation, behavioral disorders, and physical impairments requiring the use of a wheelchair. You walk out of the meeting feeling . . .

1. Enthusiastic	Somewhat Enthusiatic	Neutral	Somewhat Unenthusiatic	Unenthusiastic
2. Scared	Somewhat Scared	Neutral	Somewhat Fearless	Fearless
3. Anxious	Somewhat Anxious	Neutral	Somewhat Relaxed	Relaxed
4. Comfortable	Somewhat Comfortable	Neutral	Somewhat Uncomfortable	Uncomfortable
5. Angry	Somewhat Angry	Neutral	Somewhat Not Angry	Not Angry
6. Unwilling	Somewhat Unwilling	Neutral	Somewhat Willing	Willing
7. Interested	Somewhat Interested	Neutral	Somewhat Disinterested	Disinterested
8. Confident	Somewhat Confident	Neutral	Somewhat Insecure	Insecure
9. Nervous	Somewhat Nervous	Neutral	Somewhat Calm	Calm
10. Pleased	Somewhat Pleased	Neutral	Somewhat Displeased	Displeased
11. Weak	Somewhat Weak	Neutral	Somewhat Powerful	Powerful
12. Annoyed	Somewhat Annoyed	Neutral	Somewhat Indifferent	Indifferent
13. Accepting	Somewhat Accepting	Neutral	Somewhat Opposing	Opposing
14. Prepared	Somewhat Prepared	Neutral	Somewhat Unprepared	Unprepared
15. Resistant	Somewhat Resistant	Neutral	Somewhat Cooperative	Cooperative
16. Happy	Somewhat Happy	Neutral	Somewhat Unhappy	Unhappy
17. Pessimistic	Somewhat Pessimistic	Neutral	Somewhat Optimistic	Optimistic

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