

“Less Afraid to Have Them in My Classroom”: Understanding Pre-Service General Educators’ Preceptions about Inclusion

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The No Child Left Behind Act (NCLB, 2002) and the reauthorization of the Individuals with Disabilities Education Improvement Act (IDEA, 2004) have resulted in greater numbers of students with disabilities (SWDs) receiving most of their instruction in general education settings. Specifically, in 2004 the majority (96%) of SWDs were being included in regular settings and just over half (52.1%) of these students spent most (79%) of the day in a general education classroom (U.S. Department of Education, 2009). Over the last decade, researchers have noted the continued trend toward educating SWDs in general education settings and underscored the need for all teachers to be prepared to work with all learners (Kavale & Forness, 2000; Mastropieri & Scruggs, 2001). At the time of the Study of Personnel Needs in Special Education (SPeNSE; 2001) data collection, 96% of general educators indicated they currently or had previously taught SWDs. Exceptional learners are spending increasingly more instructional time in

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the general education setting and will require high quality teachers who are willing and ready to meet their needs.

Response to Intervention (RtI) is described as, “a school-wide initiative with special education as an explicit part of the framework spanning both general and special education in collaboration with families” (Council for Exceptional Children, 2007). RtI, as a mechanism for improving student outcomes through assessment, progress monitoring, prevention, and intervention, is in line with expectations of the NCLB and IDEA (Mellard & Johnson, 2008). An increased emphasis on the use of RtI frameworks and use of evidence-based and research-supported practice suggest the importance of inclusion and teacher accountability. The concern becomes whether or not general education teachers have the necessary skills to scaffold support within their classrooms and whether the system supports collaboration with special educators, other service providers, and families to improve outcomes for all students (McLeskey & Waldron, 2006).

To illustrate, in a review of teacher education literature, Brownell, Ross, Colon, and McCallum (2005) reported that most studies indicated that programs have content on collaboration with other professionals and families. Programs also placed an emphasis on inclusion. Unfortunately, the pedagogy used to prepare teacher candidates for collaboration or inclusion was not well documented. These findings were not surprising considering research (SPeNSE, 2001) that showed that less than one-third of early career general educators (\leq six years) reported receiving pre-service training in collaboration with special educators, the area that had the greatest effect on their sense of efficacy in working with SWDs. Slightly over half reported receiving preparation on making instructional adaptations, while two-thirds reported receiving instruction on behavior management. Limited preparation has consistently been found to heighten fear and reduce the sense of teaching self-efficacy of general educators when faced with the demands of inclusive classrooms (Boling, 2007; Lombardi & Hunka, 2001; Hastings & Oakford, 2003). Novice teachers also report feeling unprepared to meet the needs of SWDs especially in designing appropriate instruction (Conderman & Johnston-Rodriguez, 2005). Thus, teacher educators must understand the needs of pre-service teachers and emphasize the importance of being skilled in inclusive practices (Pugach, 2005).

The present study examined the perceptions of elementary and secondary education majors toward the inclusion of SWDs prior to and after taking a course on integrating exceptional students. The study is guided by Pajares' (1992) framework on beliefs. Successful teaching and learning in the inclusive classroom is largely predicated on a teacher's knowledge, skills, and dispositions, all of which can be undermined by a belief system that is inconsistent with an inclusive paradigm. Further, guiding pre-service teachers in an effort to unearth pervasive beliefs and perceptions about disability and inclusion will likely be met with resistance (Richardson, 1996). These beliefs, however, have to be countered with new information and experiences as well as knowledge and skills to effectively teach all

students in an inclusive environment. Inclusion, for the purposes of this study, is defined as students with disabilities receiving some or all of their instruction in the general education setting as appropriate to meet students' academic and social needs. Instruction is provided independently by a general education teacher or in collaboration with a special education teacher or related services provider.

According to Pugach (2005), "historically, special educators have been deeply interested in the attitudes and beliefs of general educators about the integration of students with disabilities," (p.554). This interest stems from the need for special educators to work collaboratively with general educators to provide an appropriate education for students with disabilities. However, the level of responsibility that general educators have for the outcomes of exceptional learners is increasing and warrants their equally vested interest in effective inclusionary practices. A number of researchers have studied the beliefs, knowledge, and practices of both pre-service and in-service general education teachers (e.g., Boling, 2007; Cook, 2002; Garriott, Miller, & Snyder, 2003; McHatton & McCray, 2007; Pajares, 1992; Richardson, 1996; Shippen Crites, Houchins, Ramsey, & Simon, 2005; Taylor & Sobel, 2001). This study focused on the perceptions of pre-service teachers and provides a brief review of recent literature in this area.

Related Literature

Taylor and Sobel (2001) conducted a study of beliefs about diversity and (dis)ability with 129 newly admitted graduate pre-service teachers in a collaborative teacher education program. These teacher candidates held strong positive beliefs about their responsibility to provide an equitable education for all students and about students' ability to learn. Students pursuing dual certification in elementary and special education indicated the most positive attitudes and sense of teaching self-efficacy. Yet, most participants felt that they needed more experiences to be able to meet the diverse needs of students.

Shippen, Crites, Houchins, Ramsey, and Simon (2005), examined the perceptions of 326 pre-service teachers on including special education students in general education settings. The Pre-service Inclusion Survey (PSIS), which measures perceptions ranging from hostility to receptivity and anxiety to calmness, was administered at three universities during the first and last class sessions of an introductory special education course. According to the researchers, both the future special educators and future general educators became slightly more receptive to the idea of inclusion between administrations, although at the end of the course, the general education majors still had high levels of anxiety about including students with special needs when compared to their special education counterparts. Similar to Taylor and Sobel (2001), Shippen et al. also found that future educators seeking dual certification were more receptive and less anxious than the other two groups at both points.

The need for a substantive preparation experience for pre-service teachers was

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also noted by Cook (2002) in a study investigating the inclusionary attitudes held by 181 pre-service teachers in an infused teacher preparation program (i.e., seminars on a variety of topics explicitly included special education and inclusion objectives). A modified version of the Opinions Related to Integration (ORI) scale was administered to students enrolled in a required seminar. Cook found that disability category had a significant main effect on perceived ability to teach, with learning disabilities viewed most positively. In the same vein, the pre-service teachers held positive beliefs about inclusion, but were less certain about their perceptions of general educators' abilities to teach students with disabilities other than learning disabilities.

Jung (2007) also used the ORI to survey pre-service teachers and found that those who were just beginning their program indicated more positive attitudes than those who were later in their program and had completed field experiences. However, pre-service teachers who had guided field experiences reported more favorable attitudes toward inclusion than those who had completed coursework, but no field experience.

The importance of field experiences is clear. Cameron and Cook (2007) found that beginning teacher candidates ($n=57$) rated themselves significantly higher on beliefs about inclusion and intended practices than on actual acquired skills. This suggested that teacher education programs may be doing a sufficient job of encouraging inclusive attitudes, but are still leaving pre-service teachers feeling that they are unprepared to implement and operationalize the knowledge they have gained. The difference was more staggering for general education majors than special education majors (mean skill ratings were 1.72 and 2.81 respectively).

McHatton and McCray (2007) administered a survey at the beginning of a course for general education majors on strategies for integrating exceptional students over several semesters to understand teacher candidates' perceptions of inclusion. Results revealed differences between participants in elementary education from those in secondary education. Elementary education majors reported more favorable perceptions of inclusion over all, but similar to Cook (2002), both groups' support of inclusion varied by disability category. Students with cognitive impairments, multiple disabilities, and behavior disorders were viewed as less able to be included. Further, secondary education majors were less sure of the benefit of inclusion for students regardless of ability and doubted their own efficacy to teach students with special needs to a greater degree than their elementary education counterparts.

As part of an in-depth qualitative study, Boling (2007) documented changes in one teacher candidate's understandings and attitudes toward inclusion over a semester. Using observations, interviews, and various written accounts, Boling illustrated how the participant journeyed from being resistant to receptive to the idea of inclusion. This more thorough account exemplified many of the concerns documented in the larger survey studies (Cook, 2002; Shippens et al., 2005).

Purpose

General educators are being required to take a more active role in the education of SWDs and they must be prepared to do so effectively. Their preparation coursework and experiences, whether in an integrated or stand-alone program, must address beliefs that will impact their performance and student outcomes in the inclusive classroom. These understandings have implications for teacher education program design and professional educator competencies. The present study sought to answer the following research questions:

1. What are the perceptions of elementary and secondary education majors toward the inclusion of SWDs in their classrooms prior to and after taking a course on integrating exceptional students?
2. Is there a difference in perceptions about inclusion between elementary education majors and secondary education majors?
3. What are the perceptions of general education majors about their own professional development and continued needs as a result of taking a course on integrating exceptional students?

Methods

Setting

This study was conducted at a large, urban research university in the Southeastern United States. Participants were enrolled in a course on integrating exceptional students in general education settings. This two-credit hour, one evening a week course is designed for general education majors to gain a broad understanding of their role and responsibilities for including students with disabilities. The course is scheduled to meet for two hours each week for 16 weeks in fall or spring and 10 weeks during summer. Each semester, multiple sections of the course are offered and are taught by a faculty member or adjunct instructor in the department of special education who has at least a Master's degree in special education and teaching experience. The assignments and activities include information on specific disabilities, the legal requirements under NCLB and IDEA, and specific strategies for providing appropriate instruction in the general education classroom.

Participants

The sample was comprised of both undergraduate elementary education majors (EEM) ($n=77$) and undergraduate secondary education majors (SEM) ($n=38$) who were enrolled in the course on integrating exceptional students in general education settings. The data were collected during the fall of 2006 and spring and summer of 2007. This is the only course required in both programs of study that focused on students with exceptionalities. This course is not taken in a prescribed sequence

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in either program. As a result, most students take the course near the end of their program or during their final internship. The participants in both programs were predominately female (89%) and ranged from 18 to 25 years of age (77%).

Procedures

Data were collected with different groups of students enrolled in multiple sections of the course in each of three semesters. Separate sections are provided each semester for elementary majors and secondary majors. As the sample sizes may suggest, there are typically greater numbers of students in elementary education, thus more sections of the course are offered each semester. Prior to the beginning of each semester in which data were collected, researchers met with course instructors and obtained approval to visit the classes during the first class meeting and again at the end of the semester for the purposes of describing the project, obtaining consent, and administering the survey. Collecting initial data during the first class session, prior to the delivery of any course content, was important to garner student perceptions before they could be changed as a result of the course.

Inclusion was not explicitly defined for the participants prior to the first administration, but they are aware of the course title and description provided in the program of study. The second administration, at the end of the course, was to understand how participants' perceptions of inclusion and their sense of self-efficacy about teaching students with disabilities in the general education classroom might have changed. To gain greater understanding, the second administration asked students a series of related open-ended questions. Only those participants with data for times one and two were included for analysis.

Measure

The survey instrument was used in a previous study addressing general education teacher candidates' perceptions of inclusion prior to participating in the integrating course. The instrument consists of 22 Likert-type items and had a reliability of .905 using Cronbach's alpha. The scale ranges from 1 to 5, with 1 being “strongly disagree” through 5 as “strongly agree”, and a neutral middle category. All items addressed perceptions toward inclusion (e.g., *I am willing to make needed instructional adaptations for my students with disabilities; I believe most students with disabilities (regardless of the level of their disability) can be educated in the general education classroom*). Nine questions asked about respondents' views on including students with certain types of disabilities (e.g., learning disabilities, behavior disorders, physical disabilities).

The quantitative findings from the previous study yielded interesting results, but also more questions. In the previous study (McHatton & McCray, 2007), there was a statistically significant difference ($F(1, 169)=1.592 p=.027$) between the EEM and SEM with the more favorable attitudes toward inclusion reported by the EEM. Further, the number of “undecided” responses warranted adding open-ended ques-

tions. Therefore, at time two, five open-ended questions were included. Participants were asked to describe how their perceptions of students with exceptionalities had changed as a result of the course, what information they had gained about SWDs, and what their strengths were related to working with SWDs. In addition, they were asked to share the most beneficial information gained from the course, identify areas they felt they were in need of additional support, and finally, to list any questions they may still have in their roles as general educators serving SWDs. Seventy-five of the 115 participants responded to the open-ended questions. The additional open-ended responses added insight to the primarily quantitative survey data (Creswell, 2009).

Findings

Quantitative Findings

The analysis of the quantitative findings consisted of descriptive statistics including frequency of percentages of responses and a repeated-measures ANOVA to determine change from time 1 to time 2, and differences between groups. Reliability was calculated at .906 at time one (pre) and .91 at time two (post) using Cronbach's alpha. A dependent means t-test was conducted to test for significant changes from time one and time two. Results indicate perceptions toward inclusion of students with exceptionalities were more positive at time two ($M=4.31$, $SD=.43$) compared to time one ($M=3.94$, $SD=.51$), $t(114)=8.6$, $p<.01$. A repeated measures ANOVA was also completed to determine if there was a difference in perceptions between elementary and secondary education majors. The results were not significant, $F(.009, 114)=.654$, $p>.05$. This might have been affected by the differences in the sample sizes for each group.

Findings from the quantitative analysis indicated that although participants were more positive toward inclusion of SWDs at the end of the course, 30.4% either did not agree or were undecided when asked if they believe most SWDs could be educated in general education classrooms. The two populations that pre-service teachers seemed most leery about including in their classrooms were students with intellectual disabilities and multiple disabilities. Most participants agreed that students with learning disabilities (97.3%), hearing impairments (92.1%), and health impairments (90.5%) could be taught in the general education classrooms.

Qualitative Findings

Participants' responses to the open-ended questions were transcribed and categorized by question. It should be noted that not all participants responded to every open-ended question. Question one yielded the most responses and question five the least (Question 1, $n=74$; Question 5, $n=21$). Differences in the number of responses could be due to the perceived amount of writing and time required and/or the question itself. For example, questions one through four asked specifically how perceptions had changed as a result of the course, what strengths participants pos-

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sessed in working with students with disabilities, where they still needed support, and what was the most beneficial information gained versus question five which asked what questions they still had as a general educator serving students with exceptionalities.

The transcriptions of the open-ended responses generated 18 pages of single-spaced text. Both researchers engaged in open coding (Strauss & Corbin, 1990). They independently coded each of the participants' responses to each question and assigned a word or phrase to signify the topic discussed. Several responses contained more than one concept. When this occurred, responses were segmented and coded discretely based on the topic. For example, one participant's response about what they had learned, “Being able to seek out help & assistance. Changing instruction to accommodate those that need it” was dissected and each segment given a separate code (“Being able to seek out help & assistance,” coded as support; and “changing instruction to accommodate those that need it,” coded as accommodations). Researchers met to review codes and reach consensus on any differences. Initial analysis resulted in 18 codes and 317 quotations or segments of text that contained sufficient contextualizing information to support the assigned code. Finally, axial coding (Strauss & Corbin) was employed and codes were categorized as either affective or knowledge/skills based (Table 1). For questions one and two,

Table 1
Categorization of Codes

<i>Category</i>	<i>Codes*</i>
Affective	Emotions (e.g., patient, less afraid, Beliefs (e.g., inclusion, ability to teach) Teachers have limitations Equality Self-efficacy
Knowledge/Skills	Instructional approaches Disability characteristics Legal issues Classroom/behavior management Families Support Organizational skills Accommodations/modifications Assessment Assistive technology Collaboration/co-teaching Learning styles Advocacy

* Responses coded as no change or don't know were not categorized

the majority of the codes were categorized as affective; for questions three through five, the majority of the codes were categorized as knowledge/skills based.

Question 1: How have your perceptions of students with exceptionalities changed as a result of the course?

The majority (n=64) of participants' responses to this question were affective or dispositional terms (See Table 2 for examples of participant responses). The responses were similar among EEMs and SEMs (See Table 3 for response rates by major). Most indicated having a greater appreciation of SWDs, being better able to understand differences, being open minded, and not afraid to "have them in my classroom" (SEM). Comments ranged from reinforcing already held beliefs (e.g., "It reinforces my belief that they should be included in a regular classroom," [EEM]) to having a completely changed perspective (e.g., "The course has opened my eyes & made me aware of all the opportunities & services available" [SEM]). A few respondents denoted feelings of sympathy and empathy toward SWDs (e.g., "I have developed a better understanding & sense of sympathy" [EEM] and "I've come to appreciate and empathize with them more" [SEM]). Many indicated feeling more positive toward inclusion as beneficial for all. One secondary candidate simply stated, "I believe every student can learn & will learn better together." Another viewed the general education setting as the first placement option, but not the only one (i.e., "I believe every child should have a chance in a mainstream classroom before it is ruled out").

The responses that were related to knowledge and skills focused on attaining knowledge related to inclusion and inclusive instructional practices. The SEMs discussed general and specific knowledge and skills (e.g., "Students can be successful in regular classes with the proper support" and "there are many different styles of teaching to facilitate learning") as did the EEMs. For example, one EEM expressed "feeling like I am more prepared" and another stated, "as a teacher I know I won't be alone in trying to assist these students." Only 10 responses indicated that participants felt better able to teach SWDs and five reported no changes as a result of taking the course.

Question 2: Based on what you've learned about students with exceptionalities, what do you see as your strengths in working with this population?

Similar to question one, the majority (n=55) of the participants responded to this question in affective terms using descriptors like, patient, compassionate, and open-minded. One SEM reported, "My strength in working with students with exceptionalities is my patience and understanding." Another simply stated, "I ENJOY ALL KIDS." Less than one fourth of the responses provided addressed instruction. Those that did mention instruction explicitly discussed accommodations and differentiated instructional approaches in both general (e.g., accommodations and

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modifications, pedagogical knowledge) and specific terms such as tiered lessons and differentiated instruction. For example, one secondary candidate’s comment

Table 2
Examples of Participants’ Responses

<i>Response Categories</i>	<i>Examples of Responses</i>
Question 1: Change in perceptions of students with exceptionalities	
Affective	“I’m no longer afraid of having them in my classroom.” (EEM) “I now realize they can succeed in a regular classroom.” (SEM)
Knowledge/Skills	“This course has allowed me to practice creating lesson plans that are specifically geared towards different disabilities. Thus helping me feel more comfortable in welcoming them into my classroom.” (EEM) “Accommodations can be made.” (SEM)
Question 2: Perceived strengths based on what was learned	
Affective	“I have patience to deal with their needs and perseverance to continue to help them...learn as much as the other students.” (EEM) “I’d say I’m much more likely to empathize and respect them, and much less likely to pass negative judgment.” (SEM)
Knowledge/Skills	“Using various strategies to meet specific needs.” (EEM) “Differentiating instruction, regulating class.” (SEM)
Question 3: Support still needed	
Affective	“Patience” (EEM) “Knowing how to deal with special needs children on a daily basis, not just teaching.” (SEM)
Knowledge/Skills	“Strategies and techniques for each specific disability” (EEM) “Learning how to teach them effectively and how to create a better learning environment” (SEM)
Question 4: Beneficial information gained from course	
Affective	“Being fair is giving students what they need” (EEM) “I gained a realistic viewpoint.” (SEM)
Knowledge/Skills	“Classroom management and easy modifications.” (EEM) “Strategies 4 (sic) cooperative teaching & tiered lesson plans” (SEM)
Question 5: Questions about role in serving students with exceptionalities	
Affective	“Will this take away from the time I spend on my general ed students” (EEM) “I question the term “general educator.” (SEM)
Knowledge/Skills	“I’m still unclear of when it is appropriate to make accommodations for certain students with disabilities.” (SEM) “How to work more, cooperating with special educators.” (EEM)

referenced the “ability to adapt, accommodate, and modify the lessons to cater to their needs.” Similarly, two EEMs pointed to the need to individualize instruction (e.g., “The ability to diversify instruction” and “changing instruction to accommodate those that need it”). Additional comments addressed the importance of the classroom environment (e.g., “Making the environments better for them to learn” [SEM] and “creating a fair learning environment where every student will benefit”[EEM]) and recognizing students’ strengths (e.g., “Every exceptionality has their own strengths” [SEM]).

Question 3: In what areas do you feel you still need support?

In contrast to responses to the first two questions, most of participants’ responses about needed support related to specific knowledge and skills (n=55). Only a few comments were affective in nature (“patience” reported by two EEMs); one told of uncertainty about working with students with special needs. One third of participants—both EEMs and SEMs—identified a need for additional information on instructional approaches (e.g., strategies, methods) and maintaining an environment conducive to learning (e.g., classroom management, behavior). Another need identified, primarily by EEMs, was to learn more about specific categories of exceptionality (e.g., Autism, behavior disorders, gifted). Some participants wanted to know more about the legal aspects of inclusion (e.g., “legislation, IEPs, paperwork” [SEM] and “boundaries as a gen. ed. teacher” [EEM]). Finally, ways to better meet the needs of SWDs in a mixed-ability classroom was also desired (e.g., “Knowing exactly what support each student individually is supposed to receive” [EEM] and “modifications that are realistic” [SEM]). Interestingly, the teacher candidates identified their greatest gain, which was in instruction, as still being a great need.

Question 4: What was the most beneficial information that you gained from the course?

Again, various knowledge and skills were overwhelmingly the most appreciated content (n=54) with comparable responses from EEMs and SEMs. Instruc-

Table 3
Participants’ Response Rates by Type and Major

Question	Affective n & (%)		Knowledge/Skills n & (%)	
	SEM	EEM	SEM	EEM
1	29 (90.6)	35 (83.3)	3 (9.4)	7 (16.7)
2	30 (76.9)	25 (62.9)	9 (23.1)	15 (37.1)
3	6 (24)	9 (20)	19 (76)	36 (80)
4	4 (14.2)	8 (21)	24 (85.8)	30 (79)
5	3 (30)	5 (45.4)	7 (70)	6 (54.6)

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tional approaches and information on disability characteristics were viewed as the most beneficial information obtained from the course. As in the previous question, responses varied in specificity. For instance, quite a few discussed lesson planning, differentiating instruction, and accommodations and modifications. Others appreciated learning about the resources and supports available and how to access them. A smaller number said they became more aware of their legal responsibilities and the laws pertaining to special education (e.g., “info on IEPs” [SEM]). One EEM felt that learning the definition of fairness was the most beneficial information gained. A few of the other more affective responses focused on their level of compassion and responsiveness (e.g., “empathy” [SEM] and “I need to be aware of getting the appropriate help” [EEM]) and improving the students’ experiences (e.g., “a deeper understanding of exceptional students” [SEM] and “no matter, what all of the students in society deserve an equal education & it is our job to help that happen” [EEM]).

Question 5: What questions do you still have in your role as a general educator serving students with exceptionalities?

Far fewer participants responded to this final question, but the rate was similar across EEM and SEM groups. The responses were mixed in terms of affective and knowledge and skills. Participants listed specific questions related to collaboration, behavior management, legal issues, and where to find resources. A couple EEMs were unsure about the appropriateness and fairness of inclusion. One SEM questioned the term “general educator” and the appropriateness of including kids with more significant disabilities in advanced English. An EEM seemed more willing, but wanted to know “How can I be helpful & life changing, but also be fair to the other students?” A few of the responses in this section revealed concerns regarding their sense of efficacy in working with SWDs (e.g., “What if nothing works?” [SEM], “where do I go for help?” [SEM], “what if I mess up?” [EEM]). Particularly, a few EEMs raised questions about the referral process, interventions, and “making everything work.”

The response rates for each of the open-ended question were similar across EEM and SEM groups (See Figures 2 and 3). Participants’ comments for questions one (EEM=83.3%; SEM=90.6%) and two (EEM=62.5%; SEM=76.9%), which addressed change in perception and strengths, were largely affective. This finding is similar to the positive statistical changes pre/post. In contrast, both the most beneficial information gained from the course (Question 3, EEM=80%; SEM=76%) and the most persistent need centered on knowledge and skills (Question 4, EEM=79%; SEM=85.8%). Finally, despite the low rate of response related to their professional role in inclusion, most information identified dealt with knowledge and skills (Question 5, EEM=54.6%; SEM=70%). A positive change in perceptions and feelings is a promising finding, however, providing general educators with the requisite knowledge and skills are likely even more critical.

Discussion

The purpose of this study was two-fold: (1) to understand the perceptions of pre-service general educators about the inclusion of SWDs prior to and at the end of a required course on integrating exceptional students; and (2) to determine if there was a difference by program (e.g., elementary or secondary education). Similar to Shippen et al. (2005), the quantitative data showed that positive perceptions for participants increased between time one and time two. However, the pre-service teachers seemed more amenable to including students with certain disabilities, specifically those with learning disabilities (Cook, 2002). Responses to open-ended questions suggested that pre-service teachers were more in tune to or made more

Figure 1
Frequency of Participants' Affective Comments by Major

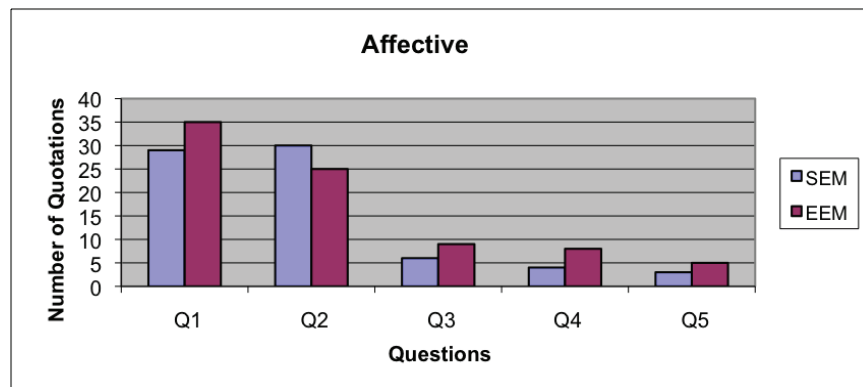
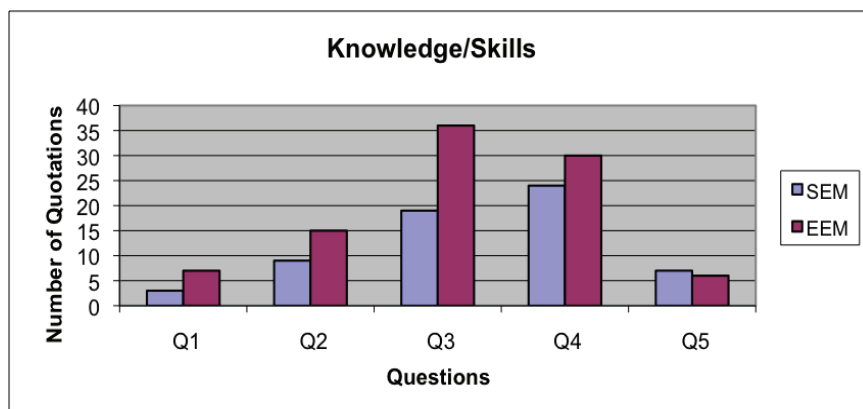


Figure 2
Frequency of Participants' Knowledge/Skills Comments by Major



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aware of the affective aspects of inclusion. A small number felt better prepared to meet the needs of SWDs in their classrooms. Further, those that discussed instruction primarily offered differentiation and accommodations as key factors. Participants were interested in more information on instructional approaches and characteristics of specific disabilities (Taylor & Sobel, 2001). SEMs were more likely to express affective changes as a result of the course, but also felt their greatest strengths were knowledge/skills related. Also, their remaining questions about their role were largely about increasing their knowledge and skills. EEMs provided nearly twice as many responses as SEMs indicating that they still needed support in knowledge and skills.

When asked specifically about their perceptions of including students with disabilities as a result of the course, participants responded more often than not with affective terms and concepts. While it is encouraging that the course resulted in improved feelings and levels of comfort about working with SWDs, it is also cause for concern at the end of their professional preparation. As was noted, the pre-service teachers in this study enroll in the course towards the end of their program, many during their last semester. The authors are left wondering whether a dispositional change is sufficient without adequate knowledge and skills to sustain them in their practice (Smith, Frey, & Tollefson, 2003). Moreover, the teacher candidates' willingness and ability to acquire such knowledge and skills once in the field may largely be dependent on the contexts in which they are employed. One participant noted that a personal strength was having, “different viewpoints than some other teachers.” If they are in an environment that supports and is structured for inclusion it is more likely that they will gain knowledge and skills, seek out resources, and be willing to collaborate to support student learning. Conversely, working in an unsupportive, barrier-laden environment may cause the changed feelings to wane and their behavior to remain unchanged (Cook, Cameron, & Tankersley, 2007). Being “less afraid” or having a “greater appreciation” does not equate to a supportive learning environment or effective instruction.

Even with the many positive comments, a number of them signified hesitance and “othering” which is still troubling. If teachers say they are willing to include SWDs, but they still view them from a deficit perspective, how much better off will students be in their classrooms? Participants' remarks such as, “help these types of students”, “feel more comfortable in educating them”, and “it is possible to teach these students in a normal classroom” warrant further unpacking, comparable to the teacher in Boling's (2007) case study. The teacher candidates in the present study seem to have provided what they viewed as socially acceptable responses with underlying meanings, whether intended or not. The responses suggest compliance rather than affirmation or acceptance of the strengths or even the rights of SWDs.

In interpreting the response data, the authors of this study question whether changed behavior naturally follows changed attitudes. The teacher candidates indicated overwhelmingly that they needed specific knowledge and skills to op-

erationalize their changed perceptions and beliefs. Yet, it is difficult to suggest that they will receive intensive instruction in this area beyond this single course. A few mentioned having some information in other courses and internship experiences that were meaningful, but the majority did not. This suggests additional coursework and experiences may be necessary if general educators are expected to provide quality instruction to all students in their classroom regardless of need or ability (Yellin, et al., 2003). For most degree programs, however, adding additional courses is not feasible because of guidelines provided by each state. It is a dilemma that must be addressed through conversation across multiple levels (i.e., local, state, IHE). The same concern holds true for students from culturally and linguistically diverse backgrounds. Pre-service teachers receive some content on diversity and some states require credentials for teaching English Language Learners, but how are teacher educators to know that it translates to good practice once candidates become teachers of record? The preparation problem in both areas is made more complex as students from diverse backgrounds are still misrepresented in certain dis/ability categories (Artiles, Harris-Murri, & Rostenberg, 2006).

The limited ability to add courses suggests that the solution rests in infusing content in the general education program of study. If pre-service general educators are going to be well prepared to provide appropriate services to SWDs, it must happen across the curriculum. Again, only one student noted receiving information about inclusion in another course, which is in line with teachers who felt ill prepared by their preparation programs for inclusion in DeSimone & Parmar's (2006) study. Particularly in the age of RtI, general education faculty will need to present this information as well. Thus, it seems that collaboration among general and special education teacher educators is essential (Smith, Frey, & Tollefson, 2003). It makes sense that special education strategies and pedagogy would be an overlay for general content methods courses to seamlessly generalize into P-12 classrooms (Cooper, Kurtts, Baber, & Vallecorsa, 2008).

When asked about areas in which they still needed support, very few of the participants mentioned classroom management. Consistent with Garriott, Miller, and Snyder (2003), most participants wanted to know more about specific disabilities and how to individualize instruction. Understanding students' needs and how to provide instruction are critical, yet, beginning teachers often find that effective classroom management and managing challenging behavior is a challenge (Hertzog, 2002; Meister & Melnick, 2003). The few that did mention behavior management focused on it as a manifestation of a disability (e.g., "potential outbursts," "students with behavioral problems," and "how to better handle emotionally handicapped"). Instruction and management should hold equal priority and inclusion might be viewed negatively if knowledge and skills are not developed in both areas (Fuchs, 2009; Lohrmann & Bambara, 2006).

Finally, proportionately fewer participants responded to the last question about what questions remained, which may reflect that perhaps they do not know

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what knowledge they lack leaving them unable to articulate specific needs. A couple indicated wanting more special education information in general and a few others expressed wanting to know where to go for help in and outside of their schools. Most telling were the comments that indicated more questions would undoubtedly come once they are in an inclusive classroom (e.g., “I would need to be in the classroom with these different students to know more about what to ask” and “I think I’ll have tons when the time comes”). This underscores the importance of structured field experiences in inclusive settings where pre-service teachers can address the needs of SWDs with the support of faculty and full-time teachers (Burton & Pace, 2009).

Study Limitations

The researchers acknowledge that this study is not void of limitations. Participants are from one institution in a particular region in the U.S., which reduces external validity. Further, self-report is often viewed as less valid and reliable than observational data. However, understanding pre-services teachers’ beliefs likely presage their subsequent actions born of those beliefs.

All secondary content areas were collapsed into one category (e.g., students majoring in English education, math education, social sciences education not analyzed by specialization) due to the small n for each specialization area. A larger sample of participants from each content area would allow for disaggregation, which may reveal distinctions based on specialization area. All participants in each major received the same upper division course of study, but the open-ended responses only shed light on some previous experiences or exposure participants had with students with disabilities.

It is possible that respondents, because of the topic and the administration in one course, answered the questions based on social desirability. Even if that is the case, the percentage of responses in the “disagree” and “neutral” categories underscore the need for increased emphasis in providing specific instruction on meeting the needs of students with disabilities in inclusive settings.

Conclusions and Recommendations

The traditional organization of the teacher education programs these students were completing requires only one course devoted to inclusion and special education. Infusion of special education content across the curriculum is one recommendation for enhancing and understanding of SWDs, but the quantity and quality of content in this area will vary based on the background knowledge of each instructor. This could be ameliorated by structuring opportunities for collaborative teaching in which faculty from special education and general education work together to deliver instruction. Also, requiring a foundational special education course for all teacher candidates at the beginning of their program is a deliberate option. Future research could examine pre-service teachers’ beliefs about inclusion after taking different

courses in the program. A follow up study of pre-service teachers' thoughts on inclusion after they have started full-time teaching could be made more robust with observations. In another vain, examining beliefs of pre-service teachers in other programs that may be more collaborative or infused, or include field experiences that explicitly focus on inclusive teaching practices would be worthwhile.

Recent studies reveal that general education teacher candidates have specific reservations about inclusion (Boling, 2007; McHatton & McCray, 2007). Their greatest concerns may be alleviated through instruction that emphasizes implementing evidence-based instructional strategies that ensure access to the general education curriculum by SWDs (Cameron & Cook, 2007). As recent federal funding initiatives suggest, inter-disciplinary work can no longer be considered an option. Teacher educators can only strengthen programs by building relationships across disciplines. Instructional strategies and accommodations that seamlessly grant students with disabilities maximum access to the general education curriculum should naturally be infused in methods courses. Further, co-teaching at the higher education level, provides an optimal opportunity for pre-service teachers to see an effective model of collaboration. It is unrealistic to think that every teacher will be skilled in every aspect of teaching students with and without disabilities. Preparing teachers to collaborate to provide the most effective instruction, however, can leverage knowledge and skills. Moreover, teacher candidates need structured and supported opportunities to work collaboratively so that they are already skilled when it is required of them on the job.

The highly qualified teacher mandate requires that special educators be certified in special education and their primary content area. However, there is no such requirement for general educators. Yet, the needs of students in inclusive settings call for certain knowledge, dispositions, and skills to ensure positive outcomes. Effective preparation for inclusion will ensure that teachers are not "afraid to have them in my class."

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Appendix

Survey

Section 1:

Demographics

Gender: ☐ Male ☐ Female
Age: ☐ 18 – 25 ☐ 26 +
Major: ☐ English (1)
☐ Science (2)
☐ Social Studies (3)
☐ Math (4)
☐ Elementary Education (5)
☐ Other (6) Please specify: _____

Section 2:

In this section, check the category which most clearly describes your attitude to the statement.
Please answer all questions:

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	1 Strongly Disagree	2 Slightly Disagree	3 Undecided	4 Slightly Agree	5 Strongly Agree
1. Including the exceptional child will promote his/her independence.					
2. Students with special needs will find it much easier to mix with their peers after leaving school if they have been taught together in regular classrooms.					
3. The integration of general students with special needs into classes is beneficial to all pupils.					
4. Inclusion offers mixed group interaction which fosters understanding and acceptance of differences.					
5. As a teacher, I would be willing to have a child with special needs in my classroom.					
6. Inclusion will give students with special needs a better chance to readily fit into their community.					
7. With the help of experienced teachers, support services and special equipment, students who are exceptional can do well in a general classroom environment.					
8. The presence of students with special needs in the general classroom helps the regular child understand and accept them in an empathetic and realistic manner.					
9. As a teacher I would be willing to take extra training so as to be better able to handle exceptional children in my classroom.					
10. I am willing to make needed instructional adaptations for my students with disabilities.					
11. I believe inclusion is a desirable educational practice.					
12. I believe most students with disabilities (regardless of the level of their disability) can be educated in the regular classroom.					
In my view, most students with the following disabilities can be educated in regular classrooms:					
13. Learning disabilities					
14. Behavioral disorders					
15. Physical disabilities					
16. Hearing impairments					
17. Visual impairments					
18. Communication disorders					
19. Health impairments					
20. Mental impairment (cognitive disabilities/developmental delay)					
21. Multi-disabilities					

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Modified Survey of Attitudes Toward the Inclusion of Students with Special Needs, originally developed by M.A. Winzer

Please respond to the following questions:

1. How have your perceptions of students with exceptionalities changes as a result of this course?
2. Based on what you have learned about students with exceptionalities, what do you see as your strengths in working with this population?
3. In what areas do you feel you still need support?
4. What was the most beneficial information that you gained from the course?
5. What questions do you still have in your role as a general educator serving students with exceptionalities?