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Preservice Teacher Perceptions of Preparedness to Teach in Inclusive Settings as an Indicator of Teacher Preparation Program Effectiveness

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Abstract

This mixed methods study examined preservice teacher perceptions of their needs related to inclusion. The study examined 120 early childhood and elementary preservice teachers from two universities, from both general and special education programs. Inclusion has been considered best practice in education for many years; however, how to best facilitate inclusive practices to meet the needs of all learners remains an area of uncertainty for preservice teachers. Prior research has connected perceptions of preparedness to effective inclusive practices. A survey was developed and validated about inclusion and perceptions of preparedness to teach in an inclusive setting. The survey included both Likert-scale items and open response questions. Exploratory factor analysis was used to examine the structure of the survey. Descriptive statistics, analysis of variance, and multiple regression were used to examine the quantitative results. Responses to open-ended questions were coded to identify qualitative themes. The findings indicated that preservice teachers lacked a coherent understanding of inclusion and perceived themselves as needing additional development to be fully prepared to teach in an inclusive setting. The results suggest that teacher preparation programs need to provide a more coherent conceptual framework to guide the enhancement of both course and field work related to inclusion and effective inclusive practices.

Keywords: inclusion, teacher education, special education, students with disabilities.

Introduction

The *Education for All Handicapped Children's Act* (EHA: PL 94–142, 1975) recognized that school-age children with disabilities are able to learn deeply and that a free and appropriate education (FAPE) can only take place in the least restrictive environment

(LRE). Hearkening back to Brown v. Board of Education (1954), EHA defined the LRE as meaning that children with disabilities must be educated with their typically developing peers to the maximum extent possible (*inclusion* in general education classrooms).

Teachers need to have a favorable view of inclusion to be effective (Alur & Timmons, 2009; Singal, 2008), and their beliefs about inclusion are often the "key to the success of inclusive education programs" (Tiwari, Das, & Sharma, 2015, p. 129). Preservice teacher preparation experiences are the beginning of a life-long learning process in which teachers' beliefs and perspectives begin to form (Flores, Santos, Fernandes, & Pereira, 2014). Helping preservice teachers form sustainable, favorable views of inclusion requires high quality class and field work. For example, experience with diverse learners, training/education, and support increase the likelihood that a teacher will form a favorable view of inclusion that can be sustained throughout their career (United Nations Educational, Scientific, and Cultural Organization (UNESCO), 2003). However, even after decades of efforts to foster inclusive learning environments, researchers have consistently found that early childhood and elementary preservice teachers in general education report feeling underprepared to foster meaningful inclusive experiences for children with disabilities (Abel, 2015; Allday, Neilsen-Gatti, & Hudson, 2013; Kiloran, Woronko, & Zaretsky, 2013).

The perceived level of preparedness of preservice teachers is consistent with the experience of in-service teachers. Peltier (1993) found that general education teachers frequently reported feeling unprepared to support students with various special needs. The assumption is often made that special education teachers have more experience and practice facilitating inclusion (Gehrke & Cocchiarella, 2013), but Peltier found that students with disabilities rarely received in-class support from a special education teacher, para-educator or a related services therapist. Furthermore, general and special education teachers seldom engaged in joint planning to make meaningful curricular modifications for students with disabilities (Hardman, Drew, & Egan, 2014). Similarly, Kraukle (2013) surveyed 194 preservice teachers (PSTs) about their perceived preparedness to work with children with special needs and their families and found that only 39% of the those surveyed felt confident about their inclusion skills. The consistency between pre- and in-service teacher perceptions of inclusion suggests that teacher preparation programs may be the lynchpin in improving teacher orientation toward inclusion. The lack of collaboration between general and special education teachers calls into question whether special education teachers actually feel better prepared to support inclusion.

The present study examined early childhood and elementary preservice general and special education teacher perceptions about their preparedness to work in an inclusive setting, comparing perceptions between grade levels and general/special education. Implications for improving teacher preparation programs were explored. The research questions were:

1. Across teacher education preparation programs (Early Childhood, Early Childhood Special Education, Elementary Education, and Elementary Special Education), is there a difference in preservice teachers' perceived level of preparedness to work in an inclusive setting?

2. Is there a difference in the perceived level of special education preservice teachers to teach general education students and the perceived level of general education preservice teachers to special education students?

3. How can preparation programs more effectively develop preservice teachers' levels of self-efficacy related to inclusion?

Inclusion is defined in the present study as each student's least restrictive environment. Inclusion is regarded within the scope of FAPE, meaning that the appropriateness of every placement is determined through the Individualized Education Program (IEP) process and does not require that students with special needs are always placed in a general education classroom.

Theoretical Framework

The present study is framed using Bandura's (1997) self-efficacy theory, in which he defined perceived self-efficacy as "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (p. 3). Teacher efficacy, originally conceptualized by Ashton (1985) as a teacher's beliefs in his or her capacity to positively influence student learning and achievement, has been associated with enhanced student achievement and autonomy, willingness to adopt new instructional strategies, and motivation to provide special assistance to low achieving students (Adedoyin, 2010). Guskey and Passaro (1994) found that personal and teacher self-efficacy were not separate constructs but that self-efficacy could be organized by a sense of internal and external loci of control. The internal locus of control encompasses beliefs such as students performing better as a result of teacher efforts. The external locus of control, by contrast, attributes outcomes to factors beyond the teacher's control such as classroom resources and amount of training. Vaz et al. (2015) found that external factors explained nearly half the variance in teacher self-efficacy. Specifically, they found that more training to support inclusion was associated with a stronger sense of self-efficacy toward inclusion. They also found that other factors (e.g., gender, age) that influenced attitudes toward inclusion were associated with self-efficacy toward inclusion.

The present study therefore focused on associations of preservice teacher preparation programs, an external locus of control, with self-efficacy toward inclusion. Efficacy beliefs are shaped early during teacher preparation and development (Hoy & Spero, 2005). Bandura (1997) also suggested that the development of self-efficacy beliefs among novice teachers is most vulnerable to change during the early learning years. Current research provides evidence of the positive influence of teacher self-efficacy on attitudes towards inclusion for children with special needs (Urton, 2013). Teachers with positive self-efficacy tend to also have positive attitudes about collaborating with other specialists from the student's educational team (Damasco, 2013). Moreover, teachers with a strong sense of self-efficacy hold more positive attitudes towards educational reform and applying new guidelines (Urton, 2013). Research has shown that the optimum time to help teachers form positive attitudes about inclusive education is during pre-service training (Ajuwon et al., 2012).

Preservice teachers' perceptions of preparedness are associated with their beliefs about their abilities as well as their responsibilities as both a pre-service and in-service teacher (Gorski, Davis, & Reiter, 2012; Darling-Hammond, Chung, & Frelow, 2002). Research has demonstrated that PSTs with high levels of self-efficacy are more likely to achieve at higher levels, that is, helping students learn better, spending additional time

planning lessons, and working with students to address individual needs (Schunk, Pintrich, & Meece, 2008). These types of teaching behaviors are exactly the types of outcomes necessary to successfully teach in an inclusive classroom.

Although PST attitudes toward children with disabilities are generally positive, research suggests that PSTs may still have uncertainties about inclusion (Berry, 2010; Gehrke & Cocchiarella, 2013; Hadadian & Chiang, 2007). Hadadian and Chiang (2007) surveyed both general education and special education preservice teachers and found that 88% of the preservice teachers in their sample felt strongly that students with disabilities should be educated with their typically developing peers; thus, attitudes about the inclusion of children with disabilities in general education programs may have positively shifted in terms of an improved sense of belonging. Hadadian and Chiang also reported, however, that 44% of that same sample felt that students with disabilities create undue burden on the general educator. This perceived undue burden may stem from a lack of teacher preparedness, and if so, indicates that institutions of higher education need to take more explicit action to help PSTs prepare to teach in inclusive settings.

The current standards set forth by The Council for the Accreditation of Educator Preparation (CAEP, 2013) do not include a requirement for training in special education or with diverse learners. States vary widely in their requirements for preparing teachers to meet the needs of students with special needs – some require coursework while others only require that particular knowledge and skills in this area be developed without specifying how they should be developed (Boccala, Morgan, Mundry, & Mello, 2010). Shade and Stewart (2001) found that such wide variation is highly problematic for teacher preparation and that even just one introductory course in special education improved perceived levels of preparedness. Most college and university teacher preparatory programs do require at least one course in special education for the general education certification track (Hemmings & Woodcock, 2011).

One course in special education has been found to be helpful in improving attitudes toward students with disabilities (McCray & McHatton, 2011). One course, however, has been found to be insufficient to fully prepare teachers with the knowledge and skills needed to individualize instruction (Cameron & Cook, 2007) and field experiences have been found to have a positive impact (e.g., Jung, 2007; McCray & McHatton, 2011).

Special education preservice teachers also report feeling underprepared to successfully meet the challenges of students with disabilities. Research on exemplary teacher education programs in both general and special education has demonstrated a need for "experiences focused on diversity, with special education faculty placing greater emphasis on students with disabilities" (Brownell et al., 2005, p. 247). Gehrke and Cocchiarella (2013) found that PSTs working toward dual certification in elementary and special education did not feel prepared to handle the demands of inclusion, citing lack of guidance from field supervisors and an inability to bridge the gap between theory and practice as two main reasons. The work of Gehrke, Cocchiarella, Harris and Puckett (2014) further substantiated the purported disconnect between pedagogical knowledge and actualization of inclusive practices. PSTs in their study reported a strong legal foundation regarding inclusion and LRE entitlements; however, the PSTs cited lack of opportunity to see inclusion fully operationalized in field placements as a reason for perceived lack of preparedness.

The disconnect between theoretical preparation and actual application highlights the importance of preparation programs that address not only the theoretical constructs of inclusion but also the knowledge and skills needed to successfully meet the needs of students in an inclusive environment.

The present study addressed this need by examining PSTs' perceptions about inclusion during two preparation programs in which the theoretical aspects of inclusion were supplemented with a field experience component. The field experience component required the PSTs to work with students with special needs in either general or self-contained classrooms.

Methods

This mixed methods study examined preservice teacher perceptions about their preparedness to work in an inclusive setting, comparing early childhood and elementary grade levels and general/special education. A triangulation mixed methods design was used, in which different but complementary data were collected on the same topic (Creswell & Plano Clark, 2007). Quantitative data from an online survey were used to compare preservice teacher perceptions of their preparedness to work in an inclusive setting by grade level and general/special education (Research Question 1). Quantitative data from the online survey were also used to compare the degree to which special education preservice teachers felt prepared to teach general education students to the degree to which general education PSTs felt prepared to teach special education students (Research Question 2). Qualitative data from the online survey were used to explore what factors preservice teachers perceive as preparing them to teach in an inclusive environment, their concerns about teaching in an inclusive environment, and what support they perceive as necessary to ensure the success of all the learners in their classroom (Research Question 3). Collecting both quantitative and qualitative data brought together the strengths of both forms of research to merge results during interpretation.

Participants

Participants consisted of general and special education PSTs preparing to teach early childhood (Grades PreK-3) and elementary grades (Grades 1-6) in two public universities in the middle Atlantic region of the United States. At the time of data collection, the two universities served a population of 206 early childhood and elementary PSTs for both general and special education. All 206 PSTs were invited to participate in the study.

A total of 120 PSTs agreed to participate (all female). Of the 120 participants, 29 were preparing to teach early childhood, 18 general and 11 special education; 87 participants were preparing to teach elementary, 49 general and 38 special education; and, 4 participants did not indicate their major. The majority of candidates (86% of the 120 participants) reported having some experience working with individuals with special needs. The average number of courses taken related to working with individuals with disabilities was 4.4, and all participants had completed a minimum of one course related to working with children with special needs.

Missing Data

Of the 120 participants, 65 (54.2%) had complete data. One item had complete data (Number of courses taken related to children with special needs and/or inclusion). Academic level had nearly complete data (99% response rate), as did academic major (97%) and prior experience with special needs and/or inclusion (97%). The remaining six qualitative questions had lower response rates, ranging from 59% to 63%. The seven quantitative items all had a 63% response rate ($N = 76$). All participants who skipped a quantitative item also skipped the rest of the quantitative items (unit non-response rather than item non-response). No discernible patterns were apparent in the missing responses by major or academic level. Listwise deletion was used for all quantitative analyses because sufficient sample size and auxiliary variables were not available for imputation methods that are valid for unit non-response (e.g., hot deck imputation as in Andridge & Little, 2010).

Instrumentation

An online survey consisting of Likert scale and open ended questions along with demographic information was developed by the researchers. The survey was developed from literature reviews on teachers' perceptions of inclusion and preparedness. To increase validity, the literature review was supplemented with PST interviews. During these interviews, the researchers facilitated informal conversations about their preparation for inclusive classrooms using a draft list of possible questions. The interviews focused on question comprehension and prior knowledge to provide a reasonable response, as recommended by Fowler and Cosenza (2008). Using information from the literature and interviews, the preliminary survey was developed and then reviewed by three experts in special education, inclusion, and survey development. It was then piloted with a small group of 23 early childhood and elementary general and special education PSTs from the two participating institutions. Following the pilot, minor changes such as question rewording for clarification were made before it was distributed. The final instrument was then distributed to all possible respondents via Survey Monkey. Follow up emails were sent three and six weeks later to encourage additional participation. The decision to use a web-based survey was based on the technology available to the population (Alreck & Settle, 2004). No incentives were given for participation. The distribution and follow up resulted in a 56% return rate, which is comparable to response rates found by Guo et al. (2016) and was deemed sufficient to make generalizations about the teacher preparation programs.

The survey consisted of 17 questions. Four questions were demographic. Six questions were open-ended and addressed PST perceptions about how well they were prepared to teach in inclusive settings. One question examined the degree to which the PSTs agreed that their university coursework had prepared them to work in inclusive settings. Six questions used a five point Likert scale to examine PST beliefs about inclusion. Each Likert-type item contained an opposite to control for survey bias, for example, "Children with special needs receive a better education in inclusive settings" and "Children with special needs receive a better education in special education settings."

The internal consistency was sufficient for the six quantitative questions, $\alpha = .715$. A principal component analysis (PCA) was conducted to identify a valid and reliable

factor structure. Varimax and Promax rotation were compared and produced the same factor structure and factor loadings. For simplicity, only the Varimax solution is provided (Table 1). The initial solution based on the Kaiser criterion (eigenvalues > 1) had two factors and accounted for 61.5% of the variance. A scree plot leveled off after two factors, corroborating the initial solution.

Table 1
Factor Loadings from Rotated Component Matrix for Two-Factor Solution

Question	Prompt	Component	
		1	2
Q12	Children with special needs receive a better education in inclusive settings	**.712**	.356
Q13[a]	Children with special needs receive a better education in inclusive settings	**.689**	-.071
Q14	Children without special needs benefit from inclusive settings	**.799**	.117
Q15[a]	Children without special needs are harmed by inclusion	**.635**	.191
Q16	The general education teacher is responsible for facilitating inclusion in the classroom	.393	**.689**
Q17	The special education teacher is responsible for facilitating inclusion in the classroom	-.049	**.924**

Note. Bold numbers indicate the highest factor loadings for each question.
[a] Questions 13 and 15 were reverse coded so that higher values indicated more positive beliefs about inclusion.

The four items that correlated most strongly with Component 1 examined PST beliefs about inclusion. The two items that correlated most strongly with Component 2 examined PST beliefs about who is responsible for facilitating inclusion in the classroom. A parallel analysis was conducted with 1000 sets of random data to help determine the number of factors to retain. Parallel analysis identifies the number of factors that would emerge with random data and often provides a more restricted view of the number of factors to retain than the Kaiser criterion (O'Connor, 2000). The parallel analysis showed that the second factor from the initial solution had a slightly lower eigenvalue than the second factor from the parallel analysis (1.118 vs. 1.154, respectively). A one factor solution was therefore examined but only accounted for 43% of the variance. Connections to theory must be considered in decisions regarding factor structures (Byrne, 2012). The one factor solution did not differentiate between beliefs about the benefits of inclusion and the responsibility for inclusion, an important theoretical difference that was purposefully built into the instrument. The decision was made therefore that the initial two-factor solution was the strongest representation of the underlying theory. The strong factor loadings, which also represent the correlations of the questions to the components in Varimax rotation, indicate strong convergent validity of the questions within each component. The weak correlations of the questions with the other component (non-bold numbers in Table 1) indicate strong discriminant validity of the questions between components. Overall, the conclusion was that the quantitative questions showed strong construct validity using the two factor solution.

Results

Demographic Analysis

The demographic questions examined participants' major, academic status, and number of courses taken related to working with students with special needs. Table 2 provides a breakdown of the number of participants by major and academic level.

Table 2
Number of Participants by Major and Academic Level

Academic Level	Major				Academic Level Total
	ECE	ECSE	ELEM	ELSE	
Sophomore	0	0	1	0	1
Junior	3	2	18	20	43
Senior	11	9	27	17	64
Graduate	5	0	5	1	11
Missing	0	0	1	0	1
Major Total	19	11	52	38	120

Note. All participants were female. ECE = Early Childhood General Education. ECSE = Early Childhood Special Education. ELEM = Elementary General Education. ELSE = Elementary Special Education.

All candidates were enrolled in early childhood, early childhood special education, elementary education, and elementary special education at one of two universities in the Middle Atlantic region of the United States. The number of courses related to teaching children with disabilities ranged from one to 20 (Mean = 4.4, SD = 4.4). The majority of participants reported some previous experience working with individuals with special needs. The ranges of experiences varied from "none" to "babysitting", to working in a special education setting as a teacher or paraprofessional.

Perceived Levels of Preparation to Work in an Inclusive Setting

Component 1, PST beliefs about inclusion, was measured by four items in the survey. Inclusion averages (Table 3) were compared across preservice teacher education programs, early childhood (ECE), early childhood special education (ECSE), elementary (ELEM), and elementary special education (ELSE). Although the ECE inclusion average was significantly greater than ELEM (p = .030) and ELSE (p = .028), the overall analysis of variance failed to support the conclusion that the inclusion averages were statistically significant between programs, $F(3, 76) = 1.977$, p = .125.

Table 3
Inclusion Average by Program

Major	N	Mean	SD
ECE	11	3.00	0.65
ECSE	5	2.70	0.33
ELEM	32	2.50	0.79
ELSE	28	2.48	0.48
Total	76	2.58	0.66

Relationship of Beliefs about Inclusion and Responsibility for Facilitating Inclusion

Component 2, beliefs about the locus of responsibility for facilitating inclusion in the classroom, was measured by two items. These two items were strongly correlated with the underlying component (see Table 1). A simple regression model was used to determine the degree to which Component 2 (*responsibility average* in Equation 1) predicted Component 1, (*inclusion average* in Equation 1).

$$Inclusion\ Average = 1.522 + 0.347\ (Responsibility\ Average) \qquad (1)$$

The regression coefficient for responsibility average was statistically significant, $p = .001$. Based on the R^2 value, *responsibility average* predicted 13.1 percent of the variance in the *inclusion average*.

The two items within Component 2 were moderately correlated with each other, $r = .425$, $p < .001$. A stepwise multiple regression model was used to determine whether one of the beliefs about responsibility (Component 2) were more strongly associated with positive beliefs about inclusion (Equation 2).

$$Inclusion\ Average = 1.290 + 0.408\ (General\ Ed\ Teacher) +$$
$$+ 0.018\ (Special\ Ed\ Teacher) \qquad (2)$$

The special education teacher term was not statistically significant and was therefore excluded from the model ($p = .692$). The resultant model suggested that believing the general education teacher to be responsible for facilitating inclusion predicts more positive beliefs about inclusion, $F(1, 75) = 17.858$, $p < .001$. Based on the R^2 value, believing that the general education teacher is responsible for facilitating inclusion predicted 19.4 percent of the variance in the inclusion average, approximately 6% more of the variance than the overall responsibility average (Component 2).

Beliefs about who is responsible for facilitating inclusion were also compared across majors (Table 4). Although ECE preservice teacher beliefs about general education teacher responsibility were significantly higher than ELEM ($p = .021$) and ELSE ($p = .017$), differences in beliefs about the responsibility of the general education teacher across programs approached statistical significance, $F(3, 76) = 2.443$, p = .071. Beliefs about the responsibility of the special education teacher were not statistically significant across programs, $F(3, 76) = .313$, $p = .816$. Taking both items into account, the multivariate test indicated near statistical significance, Wilks' Lambda = 0.845, $F(6, 142) = 2.078$, $p = .059$.

Table 4
Descriptive Statistics for Beliefs about Responsibility for Facilitating Inclusion by Major

Item	Major	N	Mean	SD
The general education teacher is responsible for facilitating inclusion	ECE	11	3.64	0.505
	ECSE	5	3.40	0.548
	ELEM	32	3.06	0.669
	ELSE	28	3.04	0.793
	Total	76	3.16	0.713
The special education teacher is responsible for facilitating inclusion	ECE	11	2.73	1.009
	ECSE	5	3.00	0.707
	ELEM	32	2.91	1.058
	ELSE	28	3.04	0.744
	Total	76	2.93	0.914

Preservice Preparation Program Supports for Facilitating Inclusion

Six open-ended questions examined PST beliefs about the aspects of their preparation program that supported their ability to facilitate inclusion. Data from these questions were coded into thematic categories that emerged from the data. Researchers first coded the data by organizing and arranging the data (Creswell, 2003) in a way that facilitated ease of data access (Merriam, 2009). Data were then reexamined to ensure that researchers fully understood the responses (Creswell, 2003). The next step was an analysis using a basic coding system developed from an initial examination of the responses. Data were then reduced into themes that emerged from the initial coding (Creswell, 2003). A second rater was asked to examine the responses independently, and consensus was reached on the first round of coding.

The first question asked PSTs to define inclusion in their own words. This question yielded 74 responses. When coded for themes, all 74 responses fit into the general theme of "including special education students in general education classes." Only three PSTs, however, defined inclusion more specifically with consideration of individual needs, and no respondents mentioned the Least Restrictive Environment (LRE). For example, one early childhood special education PST defined inclusion as *"Including students of all abilities in the same learning environment"* while an elementary PST stated that inclusion is "*Including students with special needs, language barriers, or other differences in regular classroom instruction, without pulling them out.*" Overall, the most notable theme from this question's responses was that the PSTs did not have a clear or coherent understanding of what inclusion means or of the complex factors that contribute to making an inclusive setting effective for all students.

The second question posed was: *"What has prepared you to teach in an inclusive classroom?"* This question yielded 75 responses, which were coded and categorized into the themes. Of the 75 responses, 24 answers contained information that fit into two categories and therefore received two codes for a total of 99 responses. Results are reported in frequencies and displayed in Table 5. Respondents most frequently reported that their coursework and internship experience were most valuable in preparing them to teach in inclusive settings. This belief was constant across program types. For example, an elementary general education PST stated that she was prepared because of, *"Practice with inclusion at my phase 1 internship, shadowing a special educator as a part of my phase 1 assignments, and classes on special needs and inclusion."* This was similar to an early childhood special education candidate who reported that his/her "*classes and field placement*" had provided the most preparation. Frequencies and codes are displayed in Table 5.

Table 5
Codes and Frequency of Responses: "What Has Prepared You to Teach in an Inclusive Classroom?"

Theme	Number of Responses	Percentage
Coursework	51	52%
Internship Experience	36	36%
Personal Experience	6	6%
Personal Knowledge	3	3%
Unknown	1	1%

After examining what PSTs feel they need to be prepared for inclusive settings, the third question was: *"What concerns do you have, if any, about teaching in an inclusive setting?"* Four of the 76 responses contained information that fit into two categories and therefore received two codes for a total of 80 responses. The most frequently occurring theme was meeting the 'diverse needs' of students; however, 15% of respondents did report that they were concerned about being 'fair' to all of the students and not focusing or spending too much time with a particular group. These two themes were not combined as many PSTs reported that they were specifically concerned about meeting the specific educational needs that result from having a disability. An elementary special education major stated that she was concerned about *"ensuring that all students learn to their maximum capacity, both those with and without special needs"* while an elementary education general education PST stated *"I am worried I won't give every student what they need."* Across programs, candidates reported concerns with classroom management preparation. Table 6 presents the frequency of responses for each theme.

Table 6
Themes and Frequency of Responses: "What Concerns Do You Have, if Any, About Teaching in an Inclusive Setting?"

Theme	Number of Responses	Percentage
Classroom Management	7	9%
Diverse Needs	22	28%
Student Perceptions	4	5%
Collaboration	1	1%
Assistance	7	9%
Knowledge	7	9%
Equity	12	15%
Other Responsibilities	3	4%
Administrative Support	1	1%
Inappropriate Placements	6	8%
None	1	1%

The fourth question was: *"What do you feel you need to be better prepared to teach in an inclusive setting?"* This question yielded 75 responses, 10 of which contained information that fit into multiple codes for a total of 85 codes. More than half of the candidates reported that they needed 'more experience in inclusive settings.' This response was consistent across programs. An elementary special education major stated, that she needed "firsthand experience" in order to be better prepared while an early childhood general education candidate reported that she would benefit from "a mini-placement where I could observe an experienced teacher in action for several days". Table 7 presents the frequency of responses for each theme.

Table 7
Themes and Frequency of Responses: "What Do You Feel You Need to Be Better Prepared to Teach in an Inclusive Setting?"

Theme	Number of Responses	Percent
Management	10	12%
Experience	43	54%
Coursework	10	13%
Modeling	6	8%
Resources	7	9%
Differentiation Training	7	9%
Acceptance	1	1%
None	1	1%

The survey yielded 84 responses to the fifth question: '*What do you feel you need to ensure the success of students <u>without</u> disabilities?*' Nine of the responses produced multiple themes. The most frequently occurring theme was differentiation training. An early childhood special education candidate reported that she felt *"more strategies about modifying work to make it more advanced"* were needed. However, 19% of students also reported that knowing how to set an inclusive classroom environment to prepare the students was important. Additionally, experience in inclusive settings was also noted by 8% of the PSTs. Table 8 presents the frequency of responses for each theme.

Table 8
Themes and Frequency of Responses: "What Do You Feel You Need to Ensure the Success of Students <u>without</u> Disabilities?"

Theme	Number of Responses	Percentage
Student Preparation	16	19%
Testing	1	1%
Collaboration	4	5%
Background	2	2%
Resources	7	8%
Good Teaching	2	2%
Differentiation Training	27	32%
Experience	7	8%
Parent Cooperation	1	1%
Administrative Support	4	5%
Classroom Space	1	1%
Assistance	2	2%
Classroom Management	1	1%
Unknown	3	4%

The sixth and final qualitative question was: *"What do you feel you need to ensure the success of students <u>with</u> disabilities?"* This question yielded 81 responses, and the most frequently occurring theme once again was differentiation training. However, this time PSTs also noted that curricular resources and additional adult support were necessary. An elementary special education candidate noted that she perceived needing *"classes that cover strategies of how to do this and support from teacher assistants and adminis-*

trators." This perception was echoed by an elementary general education who stated she needed "more of the extra materials and time, as well as another teacher to assist the student and stay close by" to ensure students with special needs were properly included. Table 9 presents the frequency of responses for each theme.

Table 9
Themes and Frequency of Responses: "What Do You Feel You Need to Ensure the Success of Students <u>with</u> Disabilities?"

Theme	Number of Responses	Percentage
Student Preparation	5	6%
Co-Teacher	3	4%
Background	3	4%
Resources	11	14%
Differentiation Training	32	40%
Experience	5	6%
Parent Cooperation	2	2%
Administrative Support	7	9%
Assistance	10	12%
Planning	1	1%
Placement	1	1%
Unknown	1	1%

Discussion

The present study examined PST beliefs about inclusion to determine the degree to which they perceive being prepared to facilitate inclusion and to examine which aspects of the teacher preparation are most relevant to enhancing their preparation. Previous research (see Vaz et. al, 2015) has demonstrated that better preparation and more robust experiences increase the self-efficacy of PSTs related to inclusion. The study examined three research questions that examined the differences in the perceived preparedness of PSTs from four different teacher preparation programs (early childhood general and special education and elementary general and special education) and how to increase self-efficacy related to inclusion in PSTs.

The first research question examined differences in PSTs' perceived level of preparedness to work in an inclusive setting. ECE and ECSE teachers demonstrated the highest and second highest overall scores respectively (see Table 3), which is consistent with findings from Frankel, Hutchinson, Burbidge and Minnes (2014). Early childhood PSTs (ECE and ECSE) may perceive themselves as slightly better prepared to teach in inclusive settings. This finding must be considered, however, in light of the other finding that the majority of the PSTs had an incomplete understanding of the meaning of inclusion. These results suggest that the PSTs may not have a solid foundation from which to base perceptions of their preparedness. Preservice education programs may therefore need to consider ways to more explicitly and coherently integrate preparation for inclusion, both through coursework and field experiences. The development of a coherent conceptual framework for inclusive practices may be one way to begin such enhancements (consistent with recommendations from Saderholm et.al, 2016).

Previous research has demonstrated that special education PSTs do not feel adequately prepared for inclusive settings (see Brownell et al., 2005). This links to the second research question, *Is there a difference in the perceived level of special education PSTs to teach general education students and the perceived level of general education PSTs to special education students?* As noted above, there is not a statistical difference; however, to teach further examination may be needed to compare early childhood PSTs (general and special education) to elementary PSTs (general and special education). The results of the study do suggest that it is the belief that the general educator is responsible for facilitating inclusion that correlate with higher levels of self-efficacy related to inclusion, but it raises the question of whether special education PSTs would have higher self-efficacy related to inclusion if they perceived responsibility for its facilitation.

The results of the qualitative questions may suggest that developing PSTs' self-efficacy related to inclusion is multifaceted. Overall, the most frequent perceived need was more opportunities and experiences. The results also suggest that experiences and internships in classroom with strong general educator input into the inclusive program are more effective. Another area where PSTs perceive needing support is in the area of differentiation, especially as it relates to meeting the needs of children without disabilities. As teacher educators frame their programs, this study suggests that more internship experiences in inclusive settings, with rich opportunities to differentiate instruction for all learners are needed. PSTs perceive needing additional experience working in inclusive settings in order to differentiate instruction. This perception aligns with previous research on in-service teachers (Tiwari et al., 2015, p. 129; Alur & Timmons, 2009; Singal, 2008) and indicates this as a critical area that teacher preparation programs need to address.

The findings suggest that PSTs in both general and special education programs need experience in rich, inclusive environments and more instruction and practice with differentiation. This aligns with research done by Colson et.al. (2017) in which PSTs with longer internship placements felt more prepared to engage students. This finding is particularly interesting because the assumption is often made that special education PSTs have more experience and practice facilitating inclusion, yet the results of this study, and previous research (Gehrke & Cocchiarella, 2013; Gehrke, Cocchiarella, Harris and Puckett, 2014) indicate that PSTs do not perceive being well prepared. Better preparing PSTs' views on inclusion is how we may potentially increase their levels of self-efficacy related to inclusion.

Limitations

The present study was conducted in the mid-Atlantic region with teacher preparation programs at two universities, one classified as an R2 (Doctoral universities – higher research activity) and the other as an M1 (Master's colleges and universities – larger programs). The study participants were only early childhood and elementary PSTs. The number of missing responses and small sample sizes limited the statistical power of the quantitative analyses. To the extent that the universities' teacher preparation programs are representative and the participants' perceptions are similar to other PSTs, the results are generalizable.

Implications for Teacher Preparation

The results of this study suggest that changes are needed in teacher preparation programs related to sustainable inclusive practices. For example, teacher preparation programs accredited or seeking accreditation by CAEP must attend to the Council of Chief State School Officers' (CCSSO) Interstate Teacher Assessment and Support Consortium (InTASC) standards (see CAEP, 2013, standard 1.1), which specify in several performance standards that new teachers must attend to individual learner differences in a variety of ways, for example, Standard 2b states, "The teacher makes appropriate and timely provisions (e.g., pacing for individual rates of growth, task demands, communication, assessment, and response modes) for individual students with particular learning differences or needs" (CCSSO, 2011, p. 11). Preparing teachers to teach in inclusive settings is implicitly bound up in these standards. Including explicit language targeting inclusion preparedness could encourage teacher education programs to incorporate inclusion theory into their conceptual frameworks. A more coherent conceptual framework that incorporates inclusion explicitly may improve teacher preparation by focusing all stakeholders on the "same critical components, strategies and outcomes," as recommended by Saderholm et al. (2016, p. 27) and Driskell et al. (2016).

Such enhanced conceptual frameworks are important because PSTs in both special and general education programs in the present study reported needing more experiences in inclusive settings. These frameworks should extend across programs and include special education because although those PSTs reported feeling prepared for special education (self-contained) settings, they, along with general education PSTs, did not feel prepared to teach in inclusive settings. Enhanced conceptual frameworks that focus on inclusion draw explicit attention to the need to provide more and better field experiences in inclusive settings to complement the theoretical basis for inclusion provided in coursework.

Implications for Future Research

The number of high scores on questions relating to opinions of inclusion indicates that PSTs have generally favorable opinions about inclusion; however, the qualitative results indicated that they need stronger training and experiences working in inclusive settings. The need for better preparation is particularly evident in the inconsistent inclusion definitions provided by the PSTs. One particular area where further study is needed is whether PSTs would feel more prepared if they had *explicit* instruction in and exposure to students with diverse needs. Additionally, do PSTs from states requiring more experience learning about and working with diverse learners perceive higher levels of preparedness?

Another question raised by this research is why PSTs from early childhood and early childhood special education perceive their preparedness more favorably than their elementary counterparts and whether those differences are sustained throughout their careers. Is it that the "culture" of early childhood is more inclusive than that of elementary and upper grades, or is early childhood teacher preparation different in some fundamental way from elementary teacher preparation? If this is in fact the case, what is it about early childhood teacher preparation that creates a more inclusive culture? As schools continue to become more inclusive the need to properly educate PSTs becomes more critical. These questions guide us to the next steps in understanding how to achieve the goal of sustainable inclusive teaching.

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