The Influence of Introductory Coursework on Preservice Teachers' Sense of Self-efficacy Towards Teaching in an Inclusive Classroom

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Abstract

Since the majority of students receiving special education services spend most of their school day in the general education classroom (Kena et al., 2015), it is imperative that teacher preparation programs equip preservice teachers for that context. This quantitative study explored the influence a single introductory special education course had on the efficacy beliefs of preservice teachers towards teaching in an inclusive classroom. The study included 100 participants that were undergraduate students enrolled in an introduction to special education course. Students were given the Teacher Efficacy for Inclusive Practices survey (Sharma, Loreman, & Forlin, 2012) before and after the course to determine if the course influenced their self-efficacy beliefs. Descriptive statistics and paired samples t-tests were used to analyze the data. The results indicated that the course had a significant, positive influence on preservice teachers' self-efficacy beliefs toward teaching in an inclusive classroom. Discussion and implications of the findings as well as future research are examined.

Keywords: preservice teachers, self-efficacy beliefs, inclusion, teacher education, teacher preparation

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Today's schools are tasked with educating diverse students, including students with special needs. The U.S. Department of Education reported that approximately 50% of all students with disabilities spend the majority of the school day in a general educational classroom and an additional 30% spend at least part of the day in a general education classroom (Kena et al., 2015). Since 80% of students with disabilities are in an inclusion classroom (Kena et al., 2015) teacher preparation programs need to equip preservice teachers with the necessary skills to teach students with diverse learning needs.

The majority of teacher preparation programs report incorporating some type of inclusion focused coursework into their curriculum, mostly in the form of a stand-alone courses such an introduction to special education course (Harvey, Yssel, Bauserman, & Merbler, 2010; Holland, Detgen, & Gutekunst, 2008). One of the primary goals of inclusion-focused coursework is to foster strong self-efficacy beliefs in preservice teachers so they feel prepared to teach students with disabilities in inclusive classrooms. Generally, after taking inclusion-focused coursework, preservice and in-service teachers frequently report having a positive attitude toward inclusion and students with disabilities; however, they do not report feeling prepared to teach in an inclusive classroom (Costello & Boyle, 2013; Garriott, Snyder, & Miller, 2003; Jobling & Moni, 2004).

The lack of efficaciousness toward teaching in an inclusion classroom after coursework is concerning because teachers' sense of self-efficacy is strongly linked to factors such as increased student achievement, effective classroom teaching characteristics, and personal characteristics that positively impact their teaching (Allinder, 1994; Garcia, 2004; Knoblauch & Hoy, 2007; Pajares, 1996; Soto & Goetz, 1998). Considering this finding, it is prudent for teacher preparation programs to understand and address preservice teachers' sense of self-efficacy toward teaching in inclusion settings.

Review of Literature

Theoretical Framework

This study was built on Albert Bandura's (1977) social cognitive theory, which encompasses the construct of self-efficacy. Social cognitive theory is a learning theory which asserts that people learn through observing others complete a task. The replication of an observed behavior is influenced by personal, behavioral, and environmental factors. Social cognitive theory suggests that observational learning is more likely to occur if the observer has a high degree of self-efficacy. Self-efficacy is one's belief that he or she can successfully perform a specific task (Bandura, 1977). It has been suggested that preservice teacher preparation is an ideal time to foster efficacious beliefs toward inclusion because their beliefs are being formed by their coursework and field experiences (Forlin, Loreman, Sharma, & Earle, 2009; Harvey, Yssel, Bauserman, & Merbler, 2010; Woodcock, Hemmings, & Kay, 2012). This study utilized Bandura's construct of self-efficacy to explore how an introductory special education course influenced preservice teachers' self-efficacy beliefs toward teaching in an inclusive classroom.

Inclusion Coursework Models in Teacher Preparation

Given the significant number of students with disabilities educated in general education, teacher preparation programs have been faced with the challenge of effectively preparing preservice teachers. To meet this challenge, teacher preparation programs have made modifications to their curricula and course requirements. For example, Harvey et al. (2010) surveyed a national sample of education faculty members from higher education institutions and found that 35% of teacher preparation institutions offered an introduction to special education course and 26% offered a course focusing on inclusion, which means 61% of the total respondents surveyed offered at least one course on inclusion and teaching exceptional students.

There are varying models for structuring the design of preservice teacher coursework. One option is through the program enhancement model (Peterson & Beloin, 1998) which consists of adding single courses to the curriculum or infusing inclusion content into existing courses. In addition, other studies have found that the most widely used method for providing instruction to preservice teachers about students with special needs is a stand-alone course focused on inclusion (Gao & Mager, 2011; Holland et al., 2008). While teacher preparation programs are working toward creating positive educational experiences for their preservice teachers, there is wide variety in how inclusion focused coursework and field experiences are designed (Brownell, Ross, Colon, & McCullum, 2005; Forlin & Chambers, 2011; Kim, 2011).

Preservice Teachers' Attitudes and Self-Efficacy Beliefs

Research has shown that preservice teachers are more likely to possess a positive attitude toward inclusion and students with special needs after they participate in coursework focused on inclusion in the classroom (Garriott et al., 2003; McHatton & Parker, 2013; Rakap, Cig, Parlak-Rakap, 2017; Shade & Stewart, 2001). Sze (2009) analyzed literature on pre-service teachers' attitudes toward students with disabilities and found that inclusion education for preservice teachers fostered an understanding of disabilities that translated into a positive attitude toward inclusion. Similarly, Sharma, Forlin, and Loreman (2008) and Kim (2011) found that both stand-alone courses and integrated inclusion training yielded more positive attitudes, but an integrated approach to inclusion training produced a statistically higher gain in attitudes towards inclusion. Another common finding was that field experiences were more likely to produce positive attitudinal changes if they were designed in a manner that allowed preservice teachers to learn more about disabilities (Boling, 2007; Peebles & Mendaglio, 2014). Despite coursework with or without field experiences, research has generally shown that a positive attitude does not consistently translate into preservice teachers feeling prepared to teach in inclusive settings; in fact, they may even feel less willing to include students with disabilities into their own classrooms (Costello & Boyle, 2013; Garriott et al., 2003; Jobling & Moni, 2004). In studies by Costello and Boyle (2013) and Gigante and Gilmore (2018) possessing a positive attitude toward inclusion was helpful, but that disposition alone was not enough to produce an efficacious teacher. However, the concept of self-efficacy has been shown to be a strong indicator of preservice teachers' success in their future teaching career (Chesnut & Burley, 2015).

In-Service Teacher Self-Efficacy

A teacher's sense of self-efficacy has been attributed to student outcomes, such as achievement (Cantrell, Almasi, Carter, & Rintamaa, 2013; Tschannen-Moran, Woolfolk-Hoy, & Hoy, 1998), enhanced motivation (Bandura, 1997), students' feelings of self-efficacy (Anderson, Greene, & Lowen, 1988), and a more positive outlook on school (Ross, 1992). The research suggests that teachers who have strong beliefs in their ability to teach effectively are more likely to believe that their students can achieve academically (Pendergast, Garvis, & Keogh, 2011; Woolfolk, Rosoff, & Hoy, 1990). In contrast, teachers with a low perception of their ability to teach are more likely to blame their students' inability to learn on outside factors (Woolfolk, Rosoff, & Hoy, 1990). Positive self-efficacy beliefs in the realm of student outcomes and perception of student abilities are vital for general and special educators. This is especially relevant for educators whose students are faced with compensating for disabilities to be academically successful.

Teacher self-efficacy beliefs have also been related to classroom teaching characteristics, such as the willingness to use innovative teaching techniques, displaying confidence and enthusiasm in teaching, and exhibiting greater levels of organization and planning (Allinder, 1994; Garcia, 2004; Tournaki, Lyublinkaya, & Carolan, 2009). Highly efficacious teachers tend to be less critical of students who make errors and are more likely to spend extra time with students who are struggling (Allinder, 1994; Gibson & Dembo, 1984). They are also more inclined to utilize small groups and include cooperative learning opportunities (Allinder, 1994). In addition, teachers' self-efficacy was also found to be related to effective classroom management (Gordon, 2001). Particularly relevant to special education is that a teacher's sense of self-efficacy has been found to influence decisions involving special education referrals and educational placement. Soodak and Podell (1994), for example, found that general and special education teachers with a higher sense of self-efficacy were more likely to recommend less restrictive placements and were more willing to adapt teaching strategies to meet individual needs than those with lower feelings of self-efficacy.

Finally, teacher self-efficacy beliefs have been related to personal attributes that influence their teaching. These characteristics include the willingness to try new strategies, collaborate, and demonstrate persistence when faced with teaching related obstacles (Allinder, 1994). This is in addition to being more committed to the profession, staying longer, and lower burnout rates (Allinder, 1994; Brouwers & Tomic, 2000; Milner, 2001; Tschannen-Moran, Woolfolk-Hoy, & Hoy, 1998). These qualities have direct links to the necessary requirements of being a special educator, such as participation in a multidisciplinary team, implementation of innovative instructional strategies that meet individual student needs, and commitment to the profession when faced with challenging circumstances (Soto & Goetz, 1998). Given the extensive relationships between teachers' sense of self-efficacy and their teaching practices, it is wise for teacher preparation programs to consider the best methods to develop preservice teachers' sense of self-efficacy during their training years (Peebles, 2012).

Purpose of the Study

Our study examined how a single introductory special education course, which focuses on inclusion, influenced preservice teachers' sense of self-efficacy toward teaching in an inclusive classroom. Since many teacher preparation programs offer a course or courses that focus on inclusion content, we sought to examine how a traditional course, without a field experience, influenced preservice teachers' self-efficacy beliefs. This study focuses on preservice teachers that are early in their preparation because Bandura (1977) found that self-efficacy beliefs are more malleable in the early developmental stages of learning a task and are often more difficult to change once the beliefs have been established. The study was guided by the following research question: Is there a relationship between completing a special education introductory course and preservice teachers' self-efficacy toward teaching in an inclusive classroom?

Methods

Participants

The participants in this study were undergraduate preservice teachers enrolled in an introductory special education course at a midsize Midwest University. The majority had not yet applied to

the teacher education program but were following the academic path to gain admittance and pursue teacher licensure. The demographics of the participants are represented in Table 1.

The sections of the course were taught by two adjunct instructors, one of them being the researcher of this study. Two of the sections were offered on campus and three were taught asynchronously online. The course had been standardized which means that the content, assignments, and assessments were parallel between sections. The course included lectures and activities including topics pertaining to special education such as history, legislation, collaboration, identification, evaluation, educational programming, continuum of placements, related services, and a variety of disabilities categories (emotional/ behavioral disorders, specific learning disabilities, intellectual disabilities, autism spectrum disorders, other health impairments, hearing impairment, and visual impairments).

Table 1
Participant Demographics (N=100)

Description	Percentage
Gender	
Male	16%
Female	83%
Other	1%
Age	
17-19	72%
20-22	21%
23-25	3%
25-30	4%
30 and up	0%
Major area	
Early childhood education	6%
Elementary education	34%
Secondary education (minor)	27%
Special education	11%
Elementary/ early childhood (dual)	4%
Elementary/ special education (dual)	11%
Other	6%
Non-licensure	1%
Class standing	

	Freshmen	51%
	Sophomore	32%
	Junior	10%
	Senior	6%
	Data missing	1%
GPA		
	4.0-3.5	46%
	3.4-3.0	29%
	2.9-2.5	22%
	below 2.5	3%

Instrumentation and Data Collection

Data were collected using a pre-existing, validated, and self-report survey called the Teacher Efficacy for Inclusive Practices (TEIP) scale (Sharma et al., 2012) and a demographic questionnaire. Data were collected at the beginning and end of the course, but since one of the course instructors was also the researcher the analysis did not begin until after the course had concluded and final grades were assigned. Research collaborators were responsible for maintaining the documents and data until the dual-role was no longer an issue of concern. The study received IRB approval before data collection began.

The TEIP is made up of 18 items pertaining to the participants' perception of their ability to successfully perform inclusive teaching practices. Each statement is worded in a positive manner and is directed toward carrying out a specific task. All 18 statements are assessed through a 6-point Likert item scale consisting of 'strongly disagree', 'disagree', 'disagree somewhat', 'agree somewhat', 'agree', and 'strongly agree'. The highest possible score on the scale was 108 which indicated a very high sense of self-efficacy toward teaching in an inclusive classroom. Conversely, 18 was the lowest possible score and it indicated a very low sense of self-efficacy toward teaching in an inclusive classroom. The TEIP scale is made up of three subscales that are comprised of six items each. The three subscales are efficacy to use inclusive instruction (EII), efficacy in collaboration (EC), and efficacy in managing behavior (EMB). The three subscales allow for a fine grain analysis of the construct of efficacy toward teaching in an inclusive classroom.

Sharma et al. (2012) reported that the content validity of TEIP was confirmed by six other faculty members, excluding the developers, who were identified as authorities in educational psychology and inclusive education. The developers used an exploratory factor analysis on the data from 607 preservice teachers from Canada, Australia, Hong Kong, and India to determine internal reliability. They found that the three factors (EII, EC, and EMB) on the instrument accounted for 64.5% of the total variance. In addition, Cronbach's alpha for the TEIP was strong (.89), and the subscales of efficacy to use inclusive instruction, efficacy in collaboration, and efficacy in managing behavior were .93, .85, and .85. Follow up studies on the TEIP scale report

Cronbach's alpha as .88 and .91 respectively (Malinen, Savolainen, & Xu, 2012; Savolainen, Engelbrecht, Nel, & Malinen, 2012). The results indicate that the TEIP scale was a good fit for this study because it adheres to Bandura's (1997) suggestion that instrumentation should be specific to the task measured.

Results

To learn if preservice teachers' sense of self-efficacy toward teaching in an inclusive classroom changed over the course of the semester, paired samples *t*-tests were run on the overall sense of self-efficacy as well as the TEIP's subscales of efficacy to use inclusive instruction, efficacy in collaboration, and efficacy in managing behavior. The analyses compared pre-and post-survey data for participants in all five sections of the course.

To address the research question, "Is there a relationship between completing a special education introductory course and preservice teachers' self-efficacy toward teaching an inclusive classroom?" a paired samples t-test compared the TEIP scores on the pretest and posttest administration of the survey. There was a significant difference in the scores for the posttest (M= 91.32, SD= 9.79) and pretest scores (M=78.09, SD=13.82); t (99) = 9.49, $p < .001$. The results suggest that when preservice teachers completed this introduction to special education course, their sense of self-efficacy towards teaching in an inclusive classroom positively increased. Cohen's d calculation was used to compare the effect size between the means and had an effect size of 1.12 standard deviations, which is considered a large effect size (Cohen, 1992).

Subscales and ranked responses. Each subscale included six questions specifically pertaining to the content. Feelings of efficacy toward the use of inclusive instruction and collaboration had relatively close means for both the pre- and post-test administration, and resulting in gains of 4.68 points for instruction and 4.62 points for collaboration. Efficacy in managing behaviors also saw an average increase in total efficacy (+3.89 points), but consistently lagged behind the other two categories in overall change. In sum, all the subscales demonstrated an increase in preservice efficacy beliefs, as indicated in Table 2.

Table 2
TEIP Subscale Analysis

Subscale	Pretest Mean *SD*	Posttest Mean *SD*	Difference	t	df	*p*
Inclusive Instruction	26.00 *4.64*	30.68 *3.64*	+4.68	-9.93	99	.000
Collaboration	26.75 *5.06*	31.37 *3.53*	+4.62	-8.58	99	.000
Managing Behaviors	25.36 *4.97*	29.25 *3.52*	+3.89	-7.67	99	.000

Pre-survey TEIP items with the highest mean score are displayed in Table 3 as well as, items with the lowest mean score in Table 4.

Table 3
Three TEIP Items with the Highest Mean Scores, Pre-Survey

Rank	Item	Mean	SD
1	3. I can make parents feel comfortable about coming to school.	4.91	.92
2	13. I am able to work jointly with other professionals and staff (e.g. teacher assistants, other teachers) to teach students with disabilities in the classroom.	4.86	.95
3	4. I can assist families in helping their children do well in school.	4.85	.99

Table 4
Three TEIP Items with the Lowest Mean Scores, Pre-Survey

Rank	Item	Mean	SD
1	16. I am confident in informing others who know little about laws and policies relating to the inclusion of students with disabilities.	3.29	1.44
2	17. I am confident when dealing with students who are physically aggressive.	3.29	1.30
3	10. I am confident in designing learning tasks so that the individual needs of students with disabilities are accommodated.	4.07	1.16

TEIP post-survey items with the highest mean score are displayed in Table 5 as well as, items with the lowest mean score in Table 6.

Table 5
Three TEIP Items with the Highest Mean Scores, Post-Survey

Rank	Item	Mean	SD
1	12. I can collaborate with other professionals (e.g. teachers, related service providers) in designing educational plans for students with disabilities.	5.45	.68
2	13. I am able to work jointly with other professionals and staff (e.g. teacher assistants, other teachers) to teach students with disabilities in the classroom.	5.41	.68
3	14. I am confident in my ability to get students to work together in pairs or small groups.	5.34	.62

Table 6
Three TEIP Items with the Lowest Mean Scores, Post-Survey

Rank	Item	Mean	SD
1	17. I am confident when dealing with students who are physically aggressive.	4.44	1.04
2	7. I am confident in my ability to prevent disruptive behavior in the classroom before it occurs.	4.77	.71
3	5. I can accurately gauge student comprehension of what I have taught.	4.83	.77

In summary, the results indicated that an introduction to special education course did influence preservice teachers' sense of self-efficacy toward teaching in an inclusive classroom. The paired samples *t*-tests indicated that the overall change in scores was significant (overall mean increased by 13.19 points). Each efficacy subscale (inclusive instruction, collaboration, and managing behaviors) showed that the means increased between the pre and post administration.

Discussion

The study found that completing this introduction to special education course resulted in a strong, positive change in overall self-efficacy beliefs toward teaching in an inclusive classroom. This corroborates the findings of several prior studies (Leyser, Zeiger & Romi, 2011; Shade & Stewart, 2001; Taylor & Ringlaben, 2012). It is important to note that several other studies found that coursework elicits minimal changes in self-efficacy beliefs or found it could even negatively impact self-efficacy beliefs toward teaching students with disabilities in an inclusive classroom (Forlin & Chambers, 2011; Freytag, 2001; Hastings & Oakford, 2003). Any further research that provides clarification on the development of self-efficacy beliefs in preservice teachers, including the current study, adds to the developing body of knowledge.

Mean changes in pre-and post-TEIP scores revealed that each of the subscales (efficacy to use inclusive instruction, collaboration, and managing behaviors) increased, but efficacy in managing behaviors was consistently lower than the other two subscales. Relatedly, the unease with managing behaviors has been noted in prior studies that showed preservice teachers feel less positive and less inclusive when students with emotional or behavioral disabilities are considered (Hastings & Oakford, 2003; Peebles, 2012).

Limitations of the Study

First, since data collection spanned across only one semester and from a single institution, only one set of preservice teacher responses was analyzed so a clearer picture of the development of self-efficacy beliefs could be gained if more participants across more semesters were surveyed. In addition, findings may not generalize to other institutions that possess demographic variables that significantly differ, and findings may not be representative of all preservice teachers in the nation. An additional data collection limitation was the use of self-report survey data. The use of

self-report data runs the risk of allowing participants to choose socially acceptable answers within the course context or to answer carelessly (Northrup, 1997).

Data were collected from five sections of the same course, but three of the sections were offered through an asynchronous online format and two were offered face to face. Although all five sections were standardized and highly parallel, the delivery format could have been an influencing factor on the development of the preservice teachers' sense of self-efficacy toward teaching in an inclusive classroom.

Implications

The study's findings reveal some potential programmatic and instructional gaps that teacher preparation programs should work to remediate. First, the broadest implication for practice that can be taken from this study is that completing an introduction to special education course may significantly and positively influence preservice teachers' self-efficacy beliefs toward teaching in an inclusive classroom. Since findings from prior literature have yielded differential results, these findings assist in clarifying the important role that similar courses have in preparing preservice teachers to teach in an inclusive classroom. Since the introductory course examined in the study was also delivered as a stand-alone inclusion-focused course, it is more likely that the results can be generalized to teacher preparation programs that employ courses with similar content, delivery formats, and objectives. The findings of this study should further impress upon teacher preparation programs that inclusion-oriented courses are valuable.

Second, the data showed that the participants feel considerably less efficacious toward managing behaviors than they do toward other aspects of teaching in an inclusive classroom. While the TEIP subscale results did indicate that the managing behaviors domain increased between the pre- and post-survey administration, it was consistently ranked as the least improved, and two of the three lowest items on the post-survey were in response to addressing disruptive and physically aggressive behaviors in the classroom. Based on this finding, teacher preparation programs and teacher educators should place more emphasis on instruction and practicum experiences that include best practices regarding positive behavioral interventions and supports (Christofferson &Sullivan, 2015). Since self-efficacy beliefs are more malleable in the early developmental stages, teacher preparation programs should ensure that classroom and behavior management is being taught early in preservice teachers' training and provide strong models in their practicum experiences.

Implications for Research

While the present study helped clarify the role an introduction to special education course has on preservice teachers' self-efficacy beliefs towards teaching in an inclusive classroom, further research in this area is necessary since similar previous studies had differential findings. The following three studies would provide more breadth and depth to the research domain. First, a longitudinal follow up with the same population would provide deeper insight into the long-range significance the introduction course had on their self-efficacy beliefs toward teaching in an inclusive classroom. Ideally, the participants would be surveyed during their introductory course (present study), at the end of their coursework, after student teaching, and at the end of their first-year teaching. A longitudinal study could provide rich data on the development of preservice

teachers' self-efficacy beliefs. Second, the TEIP survey was chosen for this study because it is task specific and has not been widely used in the United States. However, it would be valuable to conduct a comparative analysis of other similar self-efficacy instruments, such as the Teacher Efficacy Scale (Gibson & Dembo, 1984) and Teacher Self-Efficacy Scale (Tschannen-Moran & Hoy, 2001). Furthermore, a qualitative follow up to this study would provide a more detailed understanding of the quantitative findings and illumine instructional and personal factors that influence a preservice teachers' self-efficacy beliefs toward teaching in an inclusive classroom.

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