CHANGING PERCEPTIONS OF PRE-SERVICE EDUCATORS THROUGH SERVICE-LEARNING

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Abstract: *Despite the worldwide increasing prevalence of students with disabilities (SWD) in the general education environment, pre-service educators (PSE) are still reporting negative attitudes before and after taking coursework regarding SWD. Service-learning may be one method for improving the perceptions of PSEs towards SWD. Prior research has not investigated service-learning for PSE with SWD using change and transformative theory to understand changes. The purpose of this mixed methods study was to determine whether a service-learning activity positively influences PSE perceptions regarding the inclusion of SWD in the general education environment using a modified sentiments, attitudes, and concerns protocol. Results indicate that PSEs can positively change their perceptions concerning SWD in their future classrooms.*

Keywords: pre-service educator, service learning, special education

Introduction

Worldwide, mixed results regarding the inclusion of students with disabilities (SWD) in the general education environment have been reported. For example, the United Nations Educational, Scientific, and Cultural Organization [UNESCO] (2018) found that persons with disabilities in 49 countries ages 15-29 years old "are less likely to ever attend school...more likely to be out of school...*less likely to complete primary or secondary education*...have fewer years of school, and...less likely to possess basic literacy skills" (p. 30, emphasis added). In another report, data compiled from 33 European countries between 2012 and 2015 on the inclusion of SWD in the general education environment suggested an increasing trend: 243,650 more SWD are participating in the general education environment (European Agency for Special Needs and Inclusive Education, 2014). Data reported by various countries, such as Australia (Dempsey, 2011), Canada (Jahnukainen, 2011), and South Africa

(Walton, 2011), corroborate the findings of the European Report; however, the data only identify the number of SWD receiving services and not the location of services. A parallel trend can be found in the inclusion rates of SWD in the United States, which saw an increase of 188,180 SWD receiving services in the general education environment for 80% or more of the school day between the 2011-2012 school year (U.S. Department of Education, 2013) and 2014-2015 school year (U.S. Department of Education, 2015). One reason for this discrepancy in findings may be due to how each country defines "disability" (UNESCO, 2018). Regardless the variability in definitions, the findings suggest SWD are increasing their access to the general education curriculum. Therefore, in-service (i.e., licensed) and pre-service (i.e., training to become) general educators need to know how to teach SWD in their general education classroom.

One outcome of these worldwide increasing trends has been a focus on

identifying the attitudes, perceptions, and concerns of general educators regarding the inclusion of SWD. Historically, a lack of expertise, resources, and support have been identified as factors that contributed to the reasons why in-service general educators in the United States were unable or unwilling to meet the needs of SWD in their classroom (Scruggs & Mastropieri, 1996). More recently, researchers have continued to find that in-service general educators are still expressing reluctance to include SWD in their classrooms, whether they teach in the Republic of Korea (Hwang & Evans, 2011) or in the United States (de Boer, Pijl, & Minnaert, 2011). In-service general educators in Cyprus further reported that these perceptions towards inclusion exist due to a lack of adequate training (Symeonidou & Phtiaka, 2009), while those in the United States suggested that hands-on training would be more important in improving those perceptions (Logan & Wimer, 2013). These findings suggest that the inclusion of SWD continues to negatively affect perceptions of in-service general educators worldwide (Chao, Forlin, & Ho, 2016; Gavish, 2017; Subban & Mahlo, 2017).

Similar attitudes, perceptions, and concerns can also be found among pre-service educators throughout the world (Costello & Boyle, 2013; Forlin, Kawai, & Higuchi, 2015; Mangope, Mannathoko, & Kuyini, 2013; Sharma, Simi, & Forlin, 2015). For example, Costello and Boyle (2013) reported Australian pre-service educator (PSE) attitudes towards inclusion significantly declined while completing their coursework. A lack of knowledge and training were also identified as issues for PSE in Botswana (Mangope et al., 2013). Several ways educator preparation programs (EPP) have addressed the knowledge deficit is by infusing both general and special education curricula into one course (Taylor & Ringlaben, 2012) or creating units that specifically focus on inclusive education (Kraska & Boyle,

2014). To address training deficits, EPPs have provided specific training experiences embedded within a student teaching requirement (Golmic & Hansen, 2012), a graded practicum/field experience (McHatton & Parker, 2013), or a service-learning component tied directly to the coursework (Lucas & Frazier, 2014; Melekoglu, 2013). This last approach, service-learning, warrants further attention in that its outcome is to benefit both pre-service general educator and SWD (Maynes, Hatt, & Wideman, 2013).

Service-learning is used internationally across a variety of field and education settings to bring about change and growth in the individual and in society (Jacoby, 2015). The term service-learning is commonly used along with terms such as community service and experiential education. However, there are distinct differences in outcome and purpose for each term. Community service is a form of volunteerism wherein the main benefit is for the community as the student performs activities that do not necessarily extend or apply learning but provide service to individuals or agencies. Students may receive some learning benefit, but the main goal is to support the community. Conversely the focus in experiential learning is to primarily benefit the student through activities such as field work or internships. The main benefactor is the student who is applying or practicing skills learned from training into real world situations, and the agency is supporting extended learning. In service-learning the student and the community contribute to and mutually benefit from activities that are intentionally designed to provide value and transformation to both parties (Jacoby, 2015). Service-learning relies heavily on reciprocity and reflection to meet the student's learning needs and the community service needs (Maynes et al., 2013).

The benefits of service-learning have been demonstrated in the academic, personal, social, and citizenship development of college students. Conway, Amel, and Gerwien (2009) conducted a meta-analysis of 103 studies and found a moderate effect size for academic outcomes (d = .43), a small effect sizes for personal (d = .21), social (d = .28), and citizenship outcomes (d = .17). Celio, Durlak, and Dymnicki (2011) also conducted a meta-analysis of 62 programs that included elementary, secondary, and postsecondary participants. Of the five outcomes measured, a moderate effect size was found for academic achievement (d = .43) and small effect sizes were found for attitudes towards self (d = .28), attitudes towards school and learning (d = .28), civic engagement (d = .27), and social skills (d = .30). Furthermore, Lockeman and Pelco (2013) found college students who engaged in service-learning typically earned more credits, earned higher GPA, and graduated at higher rate than nonservice-learning peers.

The addition of service-learning in EPPs in the United States has increased (Bates, Drits, Allen, & McCandless, 2009). Service-learning for PSEs has been used in physical education (Galvan & Parker, 2011), English-language arts (Rattigan-Rohr, He, Murphy, & Knight, 2014), science and mathematics (Yang, Anderson, & Burke, 2014) programs. Regarding inclusion specifically, several researchers identified the positive effects of service-learning on the attitudes and perceptions of both general and special educators (Lucas & Frazier, 2014; Melekoglu, 2013). Melekoglu (2013) examined the impact of service-learning on inclusive attitudes and awareness among Turkish PSEs. Participants were expected to observe SWD in educational environments for ten hours over a five-week period and interact with both students and teachers. Data from reports generated by the PSEs indicated positive changes in viewpoints towards SWD. Lucas and Frazier (2014) also investigated the impact of a service-based course on American PSE attitudes towards inclusive instruction. PSEs in a service-based course on diversity were each assigned a group of K-12 students for the semester. Possible service-learning activities included tutoring, homework assistance, critical thinking activities, and interviews with parents. Analysis of data from posttest administration suggested PSEs who participated in the course had slightly higher attitudes towards inclusion and more favorable understanding of inclusion benefits.

Kaye (2010) identified five stages of effective service-learning programs that could be implemented within K-12 settings: (a) inventory and investigation; (b) preparation and planning; (c) action; (d) reflection; and (e) demonstration. While the five stages were from a K-12 perspective, they have been extended to the higher education setting (Chambers & Lavery, 2012; Coffey & Lavery, 2015) and, more specifically, to EPPs (Bates et al., 2009) in America. Service-learning within the higher education setting aligns with the transformative service-learning model (Kiely, 2005) in that adult learners make choices (Stenhouse & Jarrett, 2012), voluntarily participate (Bickford & Reynolds, 2002), critically reflect on their and others assumptions (Kiely, 2005), engage in meaningful relationships with individuals (Boyle-Baise et al., 2006; Kiely, 2005; Morton, 1995), and meet community-identified needs (Kretzmann & McKnight, 1996). Thus service-learning should directly impact the perceptions of pre-service general educators towards the inclusion of SWD.

Purpose

Of the two studies previously reported that incorporated service-learning into coursework (Lucas & Frazier, 2014; Melekoglu, 2013), they neglected to follow the outline provided by Kaye (2010)

regarding effective service-learning programming, in particular with an activity outside the special education environment. The purpose of our study, therefore, was to address the missing component in order to determine whether service-learning activities positively influences United States PSEs' perceptions regarding the inclusion of SWD in the classroom. The questions posed were

1. What effect does service-learning have on the sentiments, attitudes, and concerns of PSE regarding the inclusion of students with disabilities in the classroom?
2. How can transformation theory help guide understanding PSE perceptions?

Method

A mixed methods design was used to better understand PSE perceptions before and after service-learning activities. To identify the changes in perceptions, a one-group pre/posttest design (Glanz, 2014) was used in conjunction with questionnaire and an open-ended summary reflection to give insight into transformational shifts. The mixed methods approach was selected to provide data that would inform of PSE perception changes and data to inform why change did or did not occur. Pre/post surveys are often used for comparison in determining if a change occurred because of treatment (Gall, Gall, & Borg, 2010) while individual narrative descriptions are useful in understanding of perceptions within the study context (McMillan & Schumacher, 2010). The narrative low-inference descriptions allowed for investigation of meaning in application of theory (Gall et al., 2010).

Participants

Participants were from two introductory education courses designated Community Engaged Learning (CEL) at a university situated in the northwestern United States with a population of approximately 25,950 students. Nearly one half of the university students identify ethnicity as Caucasian, almost 10% as Hispanic, and approximately 1.5% as African American, international, and Asian and Pacific Islander each. About 1.5% of students identify as members of two or more ethnic groups and 0.5% as Native American. CEL courses require at least 15 hours of service-learning throughout the semester. Both courses are exploratory courses and require a summation reflection (Kaye, 2010; Kiely, 2005) on service-learning as part of coursework. Two of the research investigators were also course instructors. Students in these courses were primarily freshman and sophomores and usually in the process of applying for formal acceptance into the EPP for elementary, secondary, special, and early childhood licensure. Freshman and sophomore students are thought to benefit more from service-learning opportunities than are upper level undergraduates (Roldan, Strage, & David, 2004). Both events under investigation were options to complete the mandated service-learning hours (Stenhouse & Jarrett, 2012). All PSEs who wanted to take part in the service-learning activities could and were also invited to participate in the study. Twenty-one undergraduate PSE students participated in the events, and 14 voluntarily completed both pre- and post-surveys. Of the 14 participants, six participants were secondary education majors, five were elementary, and three were special education majors. Nine participants were female and five were male. Four participants reported they had no experience teaching SWD prior to the service-learning events, one reported high levels of experience (more than 30 full days), and nine reported some teaching experience with SWD.

Instrument

PSE attitudes towards the inclusion of SWD were measured using the *Sentiments,*

Attitudes, and Concerns about Inclusive Education Scale-Revised [SACIE-R] (Forlin, Earle, Loreman, & Sharma, 2011). The SACIE-R uses a 4-point Likert response scale with anchor labels for all 15 statements ranging from strongly disagree (SD) to strongly agree (SA) and includes a section for demographic information. The statements represent three subscales: sentiments, attitudes, and concerns. Each subscale consists of five statements that address how pre-service educators would engage with exceptional students (sentiments), accept students with different support needs in their classrooms (attitudes), and address concerns about inclusive education for SWD (concerns). Cronbach's alpha results as reported by Forlin et al. (2011) suggest a good level of internal consistency when measuring sentiments (.75) and overall combined factor (.74) and a moderate level of internal consistency when measuring attitudes (.67) and concerns (.65). The survey was presented electronically and modified to include a final open-ended question. Similar consistency results using Cronbach's alpha were found for sentiments (.73), attitudes (.65), concerns (.82), and overall combined factor (.86) in the current study.

Procedures

Two different events that met a community-identified need (Kretzmann & McKnight, 1996), a family night and a spring dance, were options available for PSE to select for this research. Course instructors apprised PSE verbally in class or through class emails of activities to complete a portion of service-learning requirements. Both projects were designed to provide opportunities for PSEs to willingly interact with SWDs outside of traditional special education settings (Boyle-Baise et al., 2006; Kiely, 2005; Morton, 1995) and followed two of Kaye's (2010) five stages: preparing/planning and action. For the first event (i.e., family night), PSEs prepared,

planned, and taught a developmentally appropriate learning activity for a child (ages 3 to 22) with Down syndrome. Total time of this event was two hours. Family night participants were assigned a SWD: (a) secondary teaching majors were assigned to older children (ages 13 and above); (b) early childhood students were appointed to younger children (ages below 5 years); and (c) elementary student majors were matched with children aged 5 to 12. The three-hour spring dance at a specialized school involved PSEs preparing and dancing with young adults (ages 18 to 22) with severe disabilities. PSE were not matched with children at the dance. Print and oral information about the events and applicable child information from parents were shared with participants. The pre-survey was completed electronically within two weeks prior to or when arriving at events while the post-survey was completed within two weeks after events. Summary comments were individually read and sorted to provide further explanation of statistical results.

Results

Results indicate that PSEs can positively change their perceptions to be successful in including SWD in their future classrooms, connections to change and transformative theories were made, and involvement in this type of service-learning activity may have contributed to improved perceptions of working and interacting with SWD.

Sentiments

Five statements in the survey instrument asked respondents to indicate sentiments towards SWD (see Table 1). Overall, the sentiments of PSEs towards SWD improved. In terms of sample means, a positive change occurred from pre- to post-administrations in survey statement #2. Three respondents indicated they were more likely to dread the thought of ending up with a disability, nine reported no

difference, and two reported they were less likely to dread the thought. A negative change occurred when looking at the sample means for survey statements #5, #9, #11, and #13. Five respondents indicated they were more likely to increase the amount of time engaging in contact with people with disabilities, eight reported no difference, and one was more likely to decrease contact time. Four respondents were less likely to feel terrible if they had a

disability, nine reported no difference, and one was more likely to feel terrible. Three respondents increased in their disagreement of being afraid to look directly at a person with a disability and eleven reported no difference. Finally, four respondents were less likely to find it difficult to overcome initial shock when meeting people with severe physical disabilities, nine reported no difference, and one was more likely to find it difficult.

Table 1

Sentiments of Pre-Service Educators towards Including Students with Disabilities

#	Statement	Pre (n = 14)		Post (n = 14)	
		M	SD	M	SD
02	I dread the thought that I could eventually end up with a disability.	2.21	.893	2.29	.914
05	I tend to make contacts with people with disabilities brief and I finish them as quickly as possible.	1.86	.663	1.57	.514
09	I would feel terrible if I had a disability.	2.57	1.02	2.36	.842
11	I am afraid to look directly at a person with a disability.	1.43	.514	1.21	.426
13	I find it difficult to overcome my initial shock when meeting people with severe disabilities.	1.64	.842	1.43	.756

Note: Mean response ranges from 1 to 4 (strongly disagree, disagree, agree, strongly agree).

In addition to data gathered quantitatively, participants were asked to share their feelings about being appreciative of the opportunity to participate in the events and being able to work directly with SWD. In the words of one participant, "I thought it was an amazing experience and I am very glad we were given the opportunity to go. It is not something I would have ordinarily signed up to do…". Another says, "It made me realize they were not that different and enjoyed the same things." Still another indicated, "I really loved going....and just generally a more accepting, understanding person of people with disabilities."

Attitudes

Five survey statements asked respondents to indicate their attitudes towards SWD (see

Table 2). Overall, the attitudes towards SWD improved. According to sample means, a positive change occurred from pre- to post-administrations for survey statements #3, #8, #12, and #15 while a negative change occurred for statement #6. Two respondents indicated they were more likely to include students who have difficulty expressing thoughts verbally in a regular class, ten reported no difference, and two were less likely to include. Five respondents were more likely to include students who require communicative technologies in regular classes, seven reported no differences, and two were less likely to include. Four respondents were more likely to include students who frequently fail exams in regular classes, seven reported no differences, and three were less likely to include. Finally, four

respondents were more likely to include students who need individualized academic programs in regular classes, eight reported no difference, and two were less likely to include.

Table 2
Attitudes of Pre-Service Educators towards Including Students with Disabilities

| | | Descriptive | | | |
| | | Pre (*n* = 14) | | Post (n = 14) | |
#	Statement	*M*	*SD*	*M*	*SD*
03	Students who have difficulty expressing their thoughts verbally should be in regular classes.	2.64	.633	2.71	.726
06	Students who are inattentive should be in regular classes.	2.79	.699	2.57	.756
08	Students who require communicative technologies should be in regular classes.	2.50	.650	2.71	.825
12	Students who frequently fail exams should be in regular classes.	2.43	.646	2.50	.855
15	Students who need an individualized academic program should be in regular classes.	2.43	.646	2.57	.852

Note: Mean response ranges from 1 to 4 (strongly disagree, disagree, agree, strongly agree).

Overall participant responses indicated strong feeling about the importance of including SWD. One participant shared, "She was aware of the situations going on around her and made it apparent she was capable to do things on her own that any 9 year old could do as well". Another reported, "It made me realize that they were not that different, and enjoyed the same things".

Concerns

Five survey statements asked respondents to indicate concerns towards SWD (see Table 3). Overall, the concerns of PSEs towards SWD improved. In terms of sample means, a positive change occurred from pre- to post-administrations when looking at the survey statement #14. Two respondents indicated they had a greater concern regarding their lack of knowledge and skills required to teach SWD, and twelve reported no difference in concerns. A negative change occurred survey statements #1, #4, #7, and #10. Four respondents indicated they were less concerned that SWD would not be accepted by the rest of a class, nine reported no difference, and one reported more concern. Four respondents were less concerned that it would be difficult to give appropriate attention to all students in an inclusive classroom, eight reported no difference, and two were more likely to be concerned. Three respondents were less concerned that their workload would increase if they had SWD in their class, eight reported no difference, and three were more concerned. Finally, four respondents were less concerned that they would be more stressed if they had SWD in their class, nine reported no difference, and one was more concerned.

Table 3
Concerns of Pre-Service Educators towards Including Students with Disabilities

#	Statement	Pre (n = 14)		Post (n = 14)	
		M	SD	M	SD
01	I am concerned that students with disabilities will not be accepted by the rest of the class.	2.64	.745	2.43	.514
04	I am concerned that it will be difficult to give appropriate attention to all students in an inclusive classroom.	2.71	.611	2.57	.852
07	I am concerned that my workload will increase if I have students with disabilities in my class.	2.57	.852	2.50	.760
10	I am concerned that I will be more stressed if I have students with disabilities in my class.	2.43	.646	2.24	.975
14	I am concerned that I do not have the knowledge and skills required to teach students with disabilities.	2.14	.949	2.36	.841

Note: Mean response ranges from 1 to 4 (strongly disagree, disagree, agree, strongly agree).

Some participants realized it will take work planning for SWD. One indicated, "I disliked not having time to get to know her family and her. The extra time would have helped us bond more". Another participant shared, "it showed a small portion of the diverse challenges that those who teach these children…".

Discussion

Interpretation of the quantifiable results is augmented by narrative responses to the final survey question. The concise narrative statements of participants offered additional, albeit limited, insight for understanding some survey responses within each area (sentiment, attitudes, and concerns) in relation to theory and previous work. On four of the five survey statements, PSEs were more likely to engage in longer contact, not feel terrible if they had a disability, be able to look at someone with a disability, and not be shocked when encountering someone with a severe disability. Although the majority of PSEs did not change sentiment responses from pre- to post-administration, the positive change that did occur for three respondents suggests the service-learning activity had

some impact. "I was privileged to meet…. and see the different personalities and talk with the children." "I am glad I got to work with those kids that night." The personalizing nature of service-learning provides relationships to develop even within a short time (Kiely, 2005). That most respondents did not change in their response after participating in the service-learning may indicate the need for deeper reflection for participants to understand their uncritical attitudes and assumptions (Mezirow, 2000). Such an interpretation supports previous work that a critical reflective dialogue, either individual or group, is necessary to reframe participant perspectives (Bickford & Reynolds, 2002; Boyle-Baise et al., 2006; Kiely, 2005; Stenhouse & Jarrett, 2012).

Of note is the increased dread that participants could eventually end up with a disability. One reason for the heightened dread might be due to the information acquired from coursework; with increased knowledge came realization of the limitations that people, particularly school-age children with disabilities, encounter in their everyday lives. Participation in the service-learning activity may have

furthered this realization as PSEs saw firsthand the effects of a disability on the child and families.

Regarding attitudes towards SWD, responses to four of the five survey statements indicate that PSEs were more likely to include students in a regular class who have difficulty expressing their thoughts verbally, require communicative technologies, frequently fail exams, and need an individualized academic program. Similar to the results presented in the sentiments discussion, the majority of PSEs did not change in responses from pre- to post-administration. However, positive change for some respondents further corroborate that the service-learning activity was influential in positively changing attitudes towards including SWD in their future classrooms. "It was a very good experience and I'm glad I had the opportunity to participate." The finding that PSEs were less likely to include students who are inattentive (see survey statement #6) is curious and may be answered by looking at work by Gao and Mager (2011) finding that PSEs "persistently hoarded negative feelings about children with behavioral disabilities" (p. 92). Such explanation corroborates earlier discoveries wherein teachers reported inability to manage all students (Cook, Cameron, & Tankersley, 2007) or provide needed attention to all students (Stoler, 1992).

The concerns of PSEs' abilities to include SWD appeared to decrease after participating in the service-learning activity on four out of five survey statements. Respondents indicated they were less concerned that SWD would not be accepted by classmates, it would be difficult to give appropriate attention and work load or stress would increase. "It made me realize that children with disabilities are not always hard to deal with, even though some people say that." Decreased concerns suggest that service-learning was influential in helping

to improve inclusion of SWD in future classrooms.

Negative changes in some results are thought-provoking. The results corroborate that dissonance and time engaged (less than three hours) in the events was low. When participants experience greater the dissonance there is a more opportunity for pronounced change. Statements such as "It really opened my eyes about teaching students with disabilities. I'm happy I did it" do not indicate an internal struggle (Kiely, 2004) but rather an awakening of understanding. Pre-service educators may have also viewed the service-learning as charity (Morton, 1995) or volunteerism (Jacoby, 2015), rather than advocacy. Viewing as charity is seen in comments that the events' purposes were entertainment rather than education. "I really enjoyed it and had lots of fun." "It was a great time! The children were so much fun."

Another interesting finding is from survey statement #14 wherein the concerns appear to increase after participation in the service-learning. One possible reason may be that PSEs recognize providing appropriate instruction to SWD is more involved than originally perceived. After acquiring introductory course knowledge and applying within service-learning, PSEs found they needed more direction and/or instruction to appropriately engage with SWD. Such concerns are conveyed in the following comments "I was worried that I did not prepare correctly" and "I just wish I knew how to better interact and teach them". These comments verify previous work wherein in-service general educators reported a lack of adequate training (Symeonidou & Phtiaka, 2009) or support (DeSimone & Parmar, 2006) in working with SWD. The awareness of lack of skills or abilities may have created tension for participants and thus tempered positive changes from service-learning with the realities of life (Kiely, 2004).

Limitations and Recommendations

Despite the overall positive findings from this study, several limitations still exist. From a design perspective, the small sample size and moderate response rates suggest caution when interpreting the results. Bigger sample sizes may allow for parametric analysis (i.e., paired samples *t*-test). Probability sampling (e.g., stratified random sampling) may also provide an opportunity to randomly assign PSEs into groups (control, experimental) for between subject comparisons (Aronson, 2006). While the findings provide initial evidence for the effectiveness of service-learning in an EPP, further research is warranted.

A second presenting limitation is the lack of opportunity for participants to critically and deeply reflect on the experience directly. While assigned course work does include reflection of the entire service-learning requirement, there was not specific instruction or set time to reflect specifically on these events. Further investigations should include opportunities for deeper reflection before and after service-learning (Bickford & Reynolds, 2002; Jacoby, 2015). The need, therefore, still exists to conduct research that aligns with Kaye's definition of service-learning in evaluating the changes in attitudes and perceptions of PSEs towards inclusion.

Another limitation lies within the procedures. Participants may have demonstrated pretest sensitization after they completed the pre-survey (Vogt, Gardner, & Haeffele, 2012). Because the participants were afforded the opportunity to willingly participate, they more likely were conscious of their own attitudes (Boyle-Baise et al., 2006) or assumptions (Kiely, 2005), and therefore knowledge of what the researchers were analyzing may have influenced their performance on the posttest. One possible solution would be to conduct the experiment again using a Solomon four-group design.

Conclusion

Those who participated in the described service-learning activities demonstrated positive, albeit small, growth in their sentiments, attitudes, and concerns regarding the inclusion of SWD in their classrooms. Given the variety of terms and implementation practices used with service learning, a broad generalization of positive influence on PSE is the most appropriate portrayal of implications for global teacher preparation. Future research that addresses the limitations of the study should provide a more accurate and representative understanding of the impact of service-learning on PSE as they continue their path towards a teaching career.

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