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The Impact of Service-Learning on Occupational Therapy Doctoral Students

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Service-learning (S-L) can be used as a pedagogical tool to enhance occupational therapy (OT) students' knowledge and skills in the areas of critical thinking and problem-solving, diversity, health promotion, community issues, social justice, and citizenship. S-L can be described as an experience comprising equal parts of learning and serving, where all individuals involved are considered educators and learners (Sigmon, 1997). S-L is based on the philosophy of learning by doing when students provide service in collaboration with a community partner (Flecky & Gittow, 2009). S-L can enhance OT students' flexibility, and collaboration and provide an opportunity for the student to reflect on the differences in client interactions in the community (Gittow, & Flecky, 2005). Students' experiences during community service can promote compassion, care, and a sense of community (Flecky & Gittow, 2009).

S-L is used in higher education as a teaching strategy to integrate community service with instruction and reflection. The components of a successful S-L experience are linked to academic content and standards and meet tangible and distinct community needs (Maloney et al., 2014). Both the community and the service providers should benefit from the S-L experience, and the S-L experience should establish a connection

ABSTRACT

The aim of this study was to determine how participation in a community service project impacts entry-level OT doctoral (OTD) students at different time points in their education. This study employed a mixed-method, prospective cohort design. The Community Service Attitudes Scale (CSAS) is an instrument to measure college students' attitudes about community service. Open-ended questions were asked after participation in the experience in addition to the CSAS to gather a deeper reflection of the S-L experience. A total of 62 OTD students participated in the study. There was no statistically significant difference between the CSAS scores between the OTD first-year and third-year students. Students reported that they gained knowledge regarding occupational justice and community-based interventions, how to establish a therapeutic relationship, and the impact of occupation-based interventions when asked what they learned from the experience. Through the participation in a S-L experience, the students gained knowledge regarding occupational justice and community-based interventions, how to establish a therapeutic relationship, and an

between the subject area and learning goals (Maloney et al., 2014). Because S-L combines academic learning and service to the community to create a deeper appreciation of civic responsibilities, it differs from volunteerism (Hoppes et al., 2005). Many OT students volunteer during their education; however, volunteering benefits an organization and is not directly tied to student learning. S-L experiences provide opportunities to build confidence and skills and may help prepare students for a successful transition into practice (Bazak et al., 2010). S-L can help students better understand what they are learning in the classroom through hands-on experience in a community setting. By incorporating S-L into the curriculum, Kearney (2004) reported that students that engaged in SL experiences gained skills in oral and written communication, critical thinking, and leadership skills. Compared with corequisite courses that did not involve S-L, students reported greater positive attitudes towards the courses that contained S-L activities (Kearney, 2004).

The Community Service Attitudes Scale (CSAS) is an instrument to measure college students' attitudes about community service based on Schwartz's (1977) model of altruistic helping behavior. The CSAS can be used to measure the effect of S-L and has been used across undergraduate and graduate programs (Bauer et al., 2007; Doehler, 2018; Perry, et al., 2014; Shiarella, et al., 2000). Doehler (2018) used the CSAS to measure attitudinal changes toward service before and after an S-L project with a local nonprofit organization. Bauer and colleagues (2007) used the CSAS to determine attitudes toward service activities among students and faculty.

Comparing student experiences following S-L participation at different time points in their OT education is important because the perceived benefits experienced by the students may change after being involved in community service projects throughout their educational coursework. The aim of this study was to determine if participation in a community service project impacts entry-level OT doctoral (OTD) students differently at two time points in their OT education.

Literature Review

In a scoping review of community-based occupational therapy research, the researchers concluded that community-based occupational therapy should modify the conditions that allow the community to carry out and engage in occupations that ultimately will promote the health and well-being of its members (Estrany-Munar, et al. 2021). S-L objectives and goals are collaboratively developed and designed with communities. The types of activities that can take place within S-L experiences are diverse, and students should benefit from S-L activities, and the goals of experiences should fall within the scope of practice of the occupational therapy profession (Janse van Rensburg, et al., 2019). This required a focus on the objective of enabling occupation during the S-L experience (Janse van Rensburg, et al., 2019). A study of the perceptions of community representatives regarding the outcomes of OT S-L experiences reported that the community partners gained increased knowledge and skills, attitudinal changes leading to practice reform, increased access to resources and infrastructure, enhanced community connections, enhanced confidence, and dignity, and enhanced occupational participation (Janse van Rensburg, et al., 2019).

In occupational therapy literature, several studies report on the impact of specific S-L programs. OT students who engaged in an S-L health promotion project over a semester found that S-L involvement facilitated mindfulness of community service, communication, and clinical reasoning (Lau, 2016). In a qualitative study to determine the benefits of S-L, OT students voiced themes of increased self-awareness, awareness of homeless individuals as persons, awareness of social issues, and professional self-efficacy (Maloney et al., 2014). OT students gained experience during Widening Occupation Weeks engaging with different organizations to support local organizations to complete a project or contribute to ongoing work (Parmenter & Thomas, 2015). The students learned about the occupational therapy paradigm and the value of establishing therapeutic relationships and professional practice (Parmenter & Thomas, 2015). Parmenter & Thomas (2015) reported that student learning occurs through reflection over time on the experiences offered by S-L to promote the development of personal theories of practice. Utilizing service learning in conjunction with self-reflection has shown greater impact on the students and enhanced their abilities to apply the knowledge gained to real-life healthcare situations (Hansen et al., 2007). Students that participated in a program that assisted clients with psychiatric conditions to achieve higher education and employment goals gained research and clinical skills (Schindler, 2014). Tomkovick et al. (2008) found that students who participated in S-L were more likely to participate in volunteer efforts post-graduation, indicating that student involvement S-L can lead to greater community-based efforts once they become practitioners. When students understand the impact of their service on the community and the clients served, they are more inclined to volunteer their time (Tomkovick et al., 2008). OT students led community-based health promotion groups for 20 hours in either a homeless women's shelter, senior center, an inpatient pediatric unit, or a university club that provided them with a positive experience leading groups to develop healthier lifestyles (Scott, 1999).

Methods

Study Design

This study employed a mixed-method, prospective cohort design. Post-intervention CSAS scores were used to determine the overall impact of the S-L project. Open-ended questions were included with the CSAS paper assessment to provide additional information on the student perceived benefits of participating in the S-L project.

Participants

Using convenience sampling, a cohort of first- and third-year entry-level OT doctoral program students were invited to participate in a study examining their perspectives after engaging in an S-L project. None of the students were excluded from receiving an invitation to participate, regardless of academic performance or clinical area of interest. The study received approval from the university's institutional review board, and the participants signed a consent form to participate in the study. This

experience was the first opportunity for the first year OTD students to participate in a S-L experience. The third-year students had participated in a community S-L experience in each year of their OTD curriculum, including CarFit. CarFiT is an educational program that offers older adults the opportunity to check how well their vehicles "fit" them and measure the executive functioning of clients that were receiving court-ordered drug and alcohol rehabilitation.

Procedure

OTD students delivered an eight-week financial literacy program to individuals ordered by the court to be residents of a substance abuse treatment center. Following the intervention, the students completed the CSAS and additional open-ended questions to examine the impact of the S-L experience.

Tools

The CSAS is an instrument for measuring college students' attitudes about community service after participating in an S-L activity. The CSAS includes components of normative attitudes that people can and should help in the community, beliefs that one is part of one's community and should help out, costs of helping, awareness of needs in the community, a personal desire to participate in community service (and S-L), benefits to the volunteer resulting from helping, and attitudes about the seriousness of the needs of the community (Shiarella et al., 2000). The scale consists of six demographic questions, 32 items on community service attitudes, and two items on intentions to participate in community service projects or enroll in S-L classes (Shiarella et al., 2000).

The response choices for the attitude and intention items are a 7-point Likert-type scale. The choice of seven indicates strong agreement with the statement. A total score is calculated by averaging all items into a single score. A higher score is indicative of a more favorable attitude toward S-L. The CSAS was tested for validity and reliability with a sample of 198 college students (Perry, 2010). Scores on each of the subscales of the CSAS showed strong reliability, with coefficient alpha scores ranging from .80 to .93. (Perry, 2010). The factor analysis confirmed the findings of the developer of the tool developer's findings, with eight factors having eigenvalues greater than one (Perry, 2010). Validity analyses confirmed that the measure distinguishes between groups expected to differ (Perry, 2010).

Open-ended questions were asked after participation in the experience in addition to the CSAS to gather a deeper reflection of the S-L experience. The questions included:

1. What need was met through the provision of financial literacy training?
2. What did you learn through the experience?
3. Would you like to do further community service work after this experience?

Data Analysis

Quantitative analyses were performed using SPSS Analytic Software version 27.0. (IBM SPSS Statistics for Windows, Armonk, New York, USA: IBM Corp.). The difference between the first and third year OTD student scores was analyzed using a Mann-Whitney U test. An alpha level of .05 was used for statistical significance. An inductive approach was used for the thematic analysis of the open-ended responses (Braun & Clark, 2006). Two authors reviewed the responses independently to generate initial codes. Codes were then collated into themes by the authors, discussed, and revised until agreement was achieved to identify the final themes.

Results

A total of 62 OTD students participated in the study, 31 in each cohort. The CSAS and open-ended questions were completed by all participants. The students ranged between 21 and 39 years old, with a mean age of 34. Forty-five (74%) of the students identified as Caucasian, eight (13%) as Hispanic, 7 (11%) as African American, one (1%) as Asian, and one (1%) identified as "other." The mean CSAS score of the first year OTD students was 5.79. The mean score for the third year OTD students was 6.31. A Mann-Whitney U test was run to determine if there were differences in CSAS total scores between cohorts. Distributions of CSAS scores for both cohorts were similar, as assessed by visual inspection. CSAS scores were not statistically significantly different between first year OTD students (Mdn = 208) and third-year OTD students (Mdn = 215), $U = 638.50$, $z = -7.578$, $p = .116$, using an exact sampling distribution for U (Dineen & Blakesley, 1973).

Multiple themes were identified through thematic analysis. Regarding Question 1 (What need was met through the provision of financial literacy training?), three themes emerged. Themes of skills needed to improve occupational performance (n=31), social interaction (n=17), and the opportunity for client self-expression (n=6) all emerged. Selected responses included: "*They will know how to budget and get things accomplished," "Executive functioning skills,"* and "*Peer support and compassion*".

For Question 2 (What did you learn through the experience?), three additional themes emerged. Themes included knowledge regarding occupational justice and community-based interventions (n=27), how to establish a therapeutic relationship (n=23), and the impact of occupation-based interventions (n=11). Selected responses included: "*Every individual deserves the opportunity to learn," "I learned that it is important to truly get to know someone and their values before trying to help them," I learned about the therapeutic use of self.*"

Lastly, for Question 3 (Would you like to do further community service work after this experience?), the theme of continued participation in community service work emerged. All 62 OTD students indicated that they wanted to participate in community service work following the experience. Selected responses included: "*I would like to do more community service because I enjoyed the learning that comes with it," "Absolutely,*

it gave me the confidence to be in front of others and be professional," and "*I think it is a great opportunity to use our new OT skills.*"

Discussion

This study aimed to determine the impact of an S-L project on entry-level OT doctoral students at different time points. There was no statistically significant difference between the CSAS scores between the OTD first-year and third-year students. A higher score is indicative of a more favorable attitude toward S-L, and both groups' scores were greater than 5.79. These findings indicate that continued engagement in S-L across the OTD curriculum does not change the student's attitude toward participating in a S-L experience over time. It is also possible that the CSAS instrument has a ceiling effect and cannot capture a heightened attitude toward involvement in S-L that may occur after repeated exposure to S-L. Perry et al. (2014) suggested that a possible limitation of the CSAS is that the measure is limited by a ceiling effect. However, the quantitative outcomes of the CSAS and qualitative data demonstrated that OT students gained knowledge and skills participating in the S-L experience and had a positive attitude toward the clients they interacted with.

Open-ended questions were analyzed thematically to further understand the impact of participation in a S-L experience beyond CSAS scores. One of the objectives of engagement in S-L is to allow students to determine the needs of a population and demonstrate to the students that their services can make a difference in the community (Smith, 1994). Our thematic analysis demonstrated that students reported awareness of occupational justice. Students also developed an understanding that every individual should have the opportunity to learn. These concepts are core to the principles of occupational therapy, and participation in this S-L experience allowed the students to bring home the importance of these concepts in OT practice. Occupational justice is defined as equity and fairness for individuals, groups, and communities regarding resources and opportunities for their engagement in diverse, healthy, and meaningful occupations (Nhunzvi et al., 2019). Maloney et al. (2014) also reported that OT student awareness of social issues increased following engagement in community service. S-L activities also provide students with an opportunity to gain an increased understanding of social and economic issues impacting clients. The use of S-L with underserved populations allows students an opportunity to develop into culturally sensitive OTD professionals (Short & St. Peters, 2017).

OTD students in this study also reported that they could see the impact of an occupation-based intervention. This is important because a cross-sectional survey found that although OTs value occupation-based practice, OTs spend more time on impairment-based practices than occupation-based practice (Hógblad Aas & Bonsaksen, 2022). Participant satisfaction after observing the transformative power of occupation was also reported in a qualitative study of OT students who participated in an after-school S-L program (Bazak et al., 2010).

Students in this study reported that they learned how to develop a therapeutic relationship and were excited to use the tools they learned about in school in a real-world experience. Therapists and patients face challenges in building high-quality therapeutic relationships, and these relationships develop over time (Horton et al., 2021). In occupational therapy, researchers associate therapeutic success with the quality of the therapeutic relationship (Horton et al., 2021). One student in this study reported that they were able to start using the skills they had been learning to build client/therapist rapport. Another student indicated that she stepped out of her comfort zone to communicate in a professional manner, like an OT. Another student reported that the connections they made with the individuals with substance abuse disorder were "invaluable." One student stated, "*I learned how to feel comfortable conducting assessments, including asking questions to complete an occupational profile. I also learned how to feel more comfortable in an unfamiliar population and how to be a flexible OT!*" The therapeutic use of self as a theme was also reported by Bazak et al. (2010) in their qualitative study of OT students engaged in S-L. Maloney and colleagues reported that their OT students developed increased self-efficacy (2014).

Overall, students indicated that they were more confident after the S-L experience. Professional confidence is viewed as one of the most important factors influencing clinical decision-making because the OT needs to believe that they possess the skills to assess the patient's concerns (Holland et al, 2012). Professional confidence is an important component of occupational therapy education, and students should be provided with several opportunities while they are students to build their confidence. Professional confidence should be nurtured in OT education (Holland et al, 2012).

Implication for Education

In determining criteria for community partners to be productive for OT students, Hoppes et al. (2005) stated that services should be delivered to diverse populations not typically encountered in a clinical setting. There should also be opportunities for students to experience leadership roles in program planning and interaction with clients (Hoppes et al., 2005). Finally, they reported that students should interact with clients with significant issues that challenge the student's problem-solving skills.

Thorough contemplation of the criteria, combined with thoughtful initiation and management of relationships, helps assure the quality of S-L for both students and partners. OT educators need to establish relationships with community partners that meet the requisite criteria. Organizing and maintaining this type of affiliation requires sustained interactions. Time should be allocated to meet the community partners' stakeholders, ask questions, and gain a complete understanding of the agency's missions and methods (Hoppes et al., 2005). Debriefing with the community partner following a S-L experience is also essential. The following questions can be asked of community partners. How did our students do? Did their projects meet your needs? Is there anything we can do differently next time? Has working with us been convenient for you? (Hoppes et al., 2005).

OT educators should also include student reflection in S-L experiences. Reflection is "*the use of creative and critical thinking skills to help prepare for, succeed in, and learn from the service experience and to examine the larger picture and context*

in which the service occurs" (Toole & Toole, 1995, p. 100). Students should be asked about what they experienced during the S-L opportunity and the impact of these experiences (Hoppes et al., 2005). Helping students acquire abilities to reflect critically is vital for OT programs because critical reflection has been associated with expert clinical reasoning (Hoppes et al., 2005). An S-L reflection toolkit is available online (Gateway Technical College, 2013).

Hansen et al. (2007) indicated that SL experiences provide OT educators with an opportunity for students to gain skills that support student engagement, social participation, and learning by doing. The OTD curriculum should include S-L activities to allow students to observe the importance of the therapeutic use of self (Maloney & Griffith, 2013). This is best accomplished when S-L experiences are developed early in the curriculum and sustained throughout (Kearney, 2004). S-L activities should be linked to course objectives, with clear goals and set learning experiences (Hansen, et al., 2007).

Limitations and Future Research

This S-L project was part of the OTD curriculum, which could have biased the findings. Many universities encourage community service, and social desirability may have also influenced the CSAS scores. The use of a relatively small sample size and only two cohorts from a single university may limit the generalizability of our findings. Future research should include students from multiple universities, diverse locations, and include community-identified outcomes to better engage community partners in the research. Furthermore, future studies should include longitudinal designs to examine predictors and the long-term effects of S-L on community service engagement after graduation.

Conclusion

All the OTD students that engaged in the S-L experience indicated that they wanted to participate in additional S-L experiences in the future, suggesting that the experience was worthwhile and may inspire continued S-L engagement. Through the participation in a S-L experience, the students gained knowledge regarding occupational justice and community-based interventions, how to establish a therapeutic relationship, and an awareness of the impact of occupation-based interventions on clients. S-L enables OT educators to provide opportunities for students to gain critical skills that will translate into clinical practice.

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A Qualitative Study Exploring College Student Nutrition Behaviors Within a Service-Learning Course

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Service-learning has been well established as a high-impact educational pedagogy (Astin et al., 2000; Kuh, 2015; Jacoby, 2015). As service-learning courses increase in higher education, understanding their effectiveness beyond academic outcomes is crucial. Service-learning courses have been demonstrated to influence positive health behaviors in community populations (Gray et al., 2017; Himelein et al., 2010; Jarvis et al., 2004), yet service-learning course outcomes have not been explored for health promotion among the students that are delivering the service. There is limited research available for evidence-based, comprehensive approaches to promoting health and student health behavior change during the college years (ACHA, 2018). An additional method to support improved student health behaviors through self-efficacy development could be through service-learning courses.

Much of the research on non-environmental methods to influence health behaviors in college students is associated with self-efficacy development (Dinger, 1999; Kelly et al., 1991; O'Leary, 1985; Von Ah et al., 2004). Understanding student self-efficacy related to nutrition choices could be an indicator for positive nutrition behavioral changes (Bandura, 2004; Von Ah et al., 2004). The reflective methods already embedded into service-learning platforms can serve as a meaningful way to gather additional data related to the student experience, reflecting on health behaviors. Research has eluded to improved self-efficacy, growth, and self-understanding as a result from service-learning experiences (Astin, 2000; Jacoby, 2015; Kuh, 2015). Understanding students' personal factors such as values, beliefs, and attitudes towards nutrition-related behaviors before, during, and after a service-learning course related to nutrition, can provide an in-depth understanding of the

ABSTRACT

This qualitative case study explored the influence that service-learning involvement has on undergraduate college students' cognitive, environmental, and behavioral factors related to nutrition. Utilizing the major constructs of the social cognitive theory, the research questions guided the investigation of how participants in a previously established nutrition service-learning course described their cognitive, environment, and behavioral influences related to nutrition throughout the course. Participants also described their nutrition self-efficacy after participating in a service-learning nutrition course. Participants described their experiences through a pre-post survey, reflections, and voluntary interviews. Based on these constructs, this service-learning course was found to improve knowledge, awareness, values, and behaviors related to nutrition for all study participants. Findings show positive changes in nutrition-related self-efficacy, especially related to the meaning-making experience of the service-learning. Results from this study suggest that intentional reflection questions related to health behavior factors in health-based service-learning courses may be utilized to influence behavioral outcomes.

student experience that might lead to behavior change. The purpose of this study is to deepen the understanding of how service-learning courses might impact nutrition-related behaviors among the students providing the service.

Background

Poor dietary lifestyle choices, such as low fruit and vegetable intake and diets high in processed foods, are behaviors that begin in early adulthood and impact the overall quality and productivity of life (Chan & Woo, 2010; Harris et al., 2006). Unhealthy diets are associated with increased non-communicable diseases such as cardiovascular disease, diabetes, chronic respiratory diseases, and some cancers, which are top contributors to morbidity and mortality rates in the United States (Centers for Disease Control [CDC], 2017; Chan & Woo, 2010; World Health Organization [WHO], 2018). Even with large scale preventative efforts, these behaviors and the subsequent chronic disease are continuing to increase (CDC, 2018; Harris et al., 2006; WHO, 2018). Transitioning from high school to college is an opportune time to influence these behaviors, as young adults are becoming independent and have more freedom for choices.

Unfortunately, the majority of college student nutrition behaviors are not good (American College Health Association [ACHA], 2018; CDC, 2018; Crombie et al., 2009). College students tend to have unhealthy diets that are high in fat, sodium, and sugar and low in several vital nutrients (ACHA, 2018; CDC, 2018; Sogari et al., 2018). The health behaviors taken up during college have a direct impact on the quality of life, and many of these habits remain beyond college (CDC 2017; Kuh, 2015, Sogari et al., 2018; Von Ah et al., 2004).

Improving nutrition behaviors during the college years could promote life-long health. With many of these behaviors being shaped in early adulthood, colleges and universities have an essential role in influencing these outcomes. While personal responsibility is important, additional factors that influence self-efficacy, attitudes, and values towards health can further influence these personal health behaviors (Bandura, 1977; Bandura, 2004). Bandura (1997) defines self-efficacy as a person's perceived beliefs in their abilities to carry out an action. Service-learning courses have been shown to influence self-efficacy, attitudes, values, and change behaviors related to students' civic engagement (Jacoby, 2015); however, little research has been found examining the influence of service-learning on health behaviors. If service-learning courses can improve health-related skills, self-efficacy, attitudes, and values, they can be an additional resource for colleges and universities to utilize as methods to enhance health outcomes. Therefore, the purpose of this study is to investigate the influence of service-learning on the nutrition-related personal factors, behaviors, and self-efficacy of the students who are providing the service. The rich description into the students' experiences in the service-learning nutrition course, especially as it relates to nutrition behavior self-efficacy, will add to the service-learning literature. Examining nutrition self-efficacy would include understanding students' beliefs in their abilities to choose healthier foods and overcome perceived barriers (Bandura, 1997). Understanding student's descriptions of their nutrition self-efficacy after participating in a service-learning course can provide additional opportunities to improve nutrition behaviors of college students.

Through service-learning experiences, students providing the service are viewed as professionals, leaders, and role models (Campus Compact, 2010). The reflective nature of the service-learning experience helps students express their personal and professional growth and further relate to the reciprocal impact of the experience (Astin, et al, 2000; Jacoby, 2015). Social cognitive theory can explain the construct of reciprocal determinism taking place within service-learning, demonstrating that students can be both an agent for change and experience change themselves (Bandura, 1997; Jacoby, 2015).

This reciprocal experience influences efficacy beliefs, which influences change and adaptation (Bandura, 1997). Bandura (2004) describes the social cognitive theory as a "multifaceted causal structure in which self-efficacy beliefs operate together with goals, outcome expectations, and perceived environmental impediments and facilitators in the regulation of human motivation, behavior, and well-being" (p. 1).

Social cognitive theory emphasizes the process among the behaviors, individual, and the environment as it influences self-efficacy (Bandura, 2004). Major constructs for the social cognitive theory include cognitive factors, environmental factors, and behavioral factors (Glanz et al., 2015 p. 160). The fundamentals of the theory suggest that a person's belief in efficacy is affected by psychosocial influences and that self-efficacy is important in behavior change (Bandura, 1977; Bandura, 2004). Furthermore, self-efficacy measures have been a consistent predictor of health-behavior change success (Strecher et al., 1986).

The majority of health promotion research regarding influencing college student health behaviors uses self-efficacy measures within a social cognitive construct (Buckworth, 2017; O'Leary, 1985; Von Ah et al., 2004). Self-efficacy is a perceived belief in the ability to perform a given task (Bandura, 1993; Buckworth, 2017). High self-efficacy has been correlated with improved health behaviors, lower rates of unhealthy behaviors, and sustained behavior changes (Bandura, 2004; Martinelli, 2002; Von Ah et al., 2004). Self-efficacy perceptions influence behavior change (Strecher et al., 1986). Reflective assignments within the service-learning experience can be shaped to highlight major constructs within the social cognitive theory, along with self-efficacy changes. Self-efficacy measures can predict what behavior goals are set and the motivational commitment for sustained change (Bandura, 1997; Bandura, 2004; Clark & Zimmerman, 2014).

Thus, exploring the major constructs of social cognitive theory and self-efficacy, as a component to predict behavior change, can provide a deeper understanding of the experience. These could also highlight challenges and barriers related to environmental conditions to assist in behavioral management (Bandura, 1997). These factors can be explored through a nutrition-themed service-learning course including: knowledge of nutrition needs and benefits, perceived self-efficacy regarding control over the dietary habits, outcome expectations, health goals, and environmental factors (Bandura, 2004). The reflective component of the service-learning model is ideal for exploring influence on behavior change (Jacoby, 2015; Kuh, 2015).

As educators and higher education systems collaborate on solutions to the lifestyle-related health epidemics in the United States, this partnership will be essential for effective change. Multiple avenues for health influences are needed for impact that is more substantial. Influencing health behaviors in college can promote life-long health

benefits. By connecting service-learning to student health behavior outcomes, additional models for this educational method can be employed to create more meaningful learning strategies for our students. Understanding students' experiences as they relate to cognitive, environmental, and behavioral factors regarding nutrition, could provide an in-depth understanding of the student experience. Examining the student experience before, during, and after a service-learning health course can assist in understanding factors that could lead to improved health behaviors because of service-learning courses.

Methodology

This case study provides rich description into the nutrition-related factors described by students through surveys, reflections, and interviews throughout the service-learning experience. The following questions, utilizing the major constructs of the social cognitive theory (Bandura, 1997; Glanz et al., 2015), guided the research:

(RQ1) How do undergraduate students participating in a nutrition service-learning course describe their cognitive, environment, and behavioral influences related to nutrition throughout the course?

(RQ2) How do students describe their nutrition self-efficacy after participating in a service-learning nutrition course?

Design of the Study

The primary goal of the study was to explore the students' experience of the service-learning as it relates to major constructs of the social cognitive theory and self-efficacy for nutrition behaviors. Major constructs for the social cognitive theory include cognitive factors, environmental factors, and behavioral factors (Glanz et al., 2015 p. 160). A constructivist lens was appropriate as this approach allows for multiple interpretations of experiences as reality is being socially constructed (Merriam & Tisdell, 2016; Patton, 2002). Creswell (2014) describes a constructivist approach to research from a complexity of views, seeking to find meanings that are often subjective through previous perspectives and social experiences. Patton (2002) adds that a constructivist approach examines the perceptions of the experience and those implications for their lives and interactions. Student perceptions of their health, attitudes, self-efficacy, values, and beliefs are subjective concepts. These concepts were explored through interaction with the service-learning experience and assessed through targeted reflection prompts, surveys, and interviews designed to explore the multifaceted aspects of nutrition-related behaviors and self-efficacy beliefs.

Qualitative research methods were used to provide an in-depth understanding of student experiences through rich description described during and after the service-learning course. A qualitative case study design was used, with multiple sources of information that were collected and analyzed to provide an in-depth understanding of

how service-learning courses could influence the students that participate in them. In this study, the outcomes examined are those influences of the service-learning experience on college students' self-efficacy and cognitive, behavioral, and environmental factors; as part of the major constructs of the social cognitive theory.

Participants

All students enrolled in a previously established nutrition-related service-learning course at a small private liberal arts college in the Midwest were invited to participate in this study. Students enrolled in the course were given information regarding the research project during the first week of class and provided with an opportunity for consent for data collection. The participation was voluntary and the data collected was from required course assignments as part of the service-learning course objectives for all students. Students were also invited to participate in a post-experience interview, which was separate from the course expectations. Students were given the opportunity to consent for all, none, or partial participation in the data collection. Participation in the study or not did not affect their opportunity for success in the course. Twelve undergraduate students were enrolled in this course in the Fall 2020 semester. Seven students consented for participation in the research study and five of those students were interviewed post-experience. As shown in Table 1, there were four males and three females surveyed. These gender terms were identified by the students completing the survey. Of the seven students, four were sophomores, two were juniors, and one was a senior. They ranged in majors with four being physical education majors, two elementary education majors, and one exercise science major. Only one of the students had taken a nutrition course prior to this semester.

Table 1

Demographic Data for Service-Learning Students

Variables	N=7
Gender	
Female	3
Male	4
Year in school	
Freshman	0
Sophomore	4
Junior	2
Senior	1
Major	
Physical Education	4
Early Elementary Education	2
Exercise Science	1
Previous Nutrition Course	
Yes	1
No	6

Course Content

The course is a required course for education majors but was also available for general education elective credit. The course was 16-weeks in length, with 8 weeks consisting of the service-learning experience. The course started with pre-service material for 4 weeks, including background information regarding nutrition and service-learning. The instructor explained the research project during week one and two of the course, providing a consent form in week two. Students had the option to consent for survey data, reflection content, and post-experience interview options. The service-learning experience began in week five with virtual introductions among the site and the students. Following introductions, students, in groups of three, selected a pre-created evidenced-based nutrition lesson for third graders to review and adapt for the first nutrition lesson. The subsequent nutrition lessons were developed through student-selected topics based on their interests along with the needs of third graders. Prior to presenting these self-selected lessons, students went through a peer-reviewed process. Nutrition lessons were then delivered and recorded during class time and sent electronically to the elementary classrooms. Each student delivered one individual lesson and worked on four additional group lessons. The class provided eight total nutrition lessons to two third-grade classrooms.

Service-Learning Site

A local elementary school's third grade classes were selected as the site for the service-learning partnership. Nutrition education has previously been established as a need by the County Health Department (2008) and was an approved area for partnership by the local school district. The third-grade classes at the partner school has a long-standing partnership with various health-related service-learning courses at the college and has agreed to continue in this capacity. The service aspect was adapted during this experience for COVID social distant learning needs. College students performed the lessons via video and the lesson were given to the students from their respective teachers.

Data Collection Tools

To provide a comprehensive understanding of the students' experiences, data was collected from multiple sources including surveys, interviews, and class reflections. First, a pre-experience survey was given in class to provide data related to the demographic background, nutrition knowledge, nutrition environment, and brief fruit and vegetable self-efficacy measures. The self-efficacy measures were adapted from Bandura (2006) and Mainvil et al. (2009). The goals for the survey were to provide early insight to self-efficacy, attitudes, values, and beliefs regarding nutrition behaviors and to assist in the development of reflection discussion prompts and assignments throughout the course experience. Survey questions included open-ended questions and a self-efficacy scale for fruits and vegetables and can be found in Appendix A.

Once the service-learning course began, service-learning reflection assignments were given every 2 weeks during the 8-week service-learning experience, providing four reflections total. Reflecting on the experience through a variety of reflection tools can allow students to express themselves and provide a more in-depth understanding to their experience (Kessler & Burns-Whitmore, 2011). Guided reflection responses were specific to nutrition behavior efficacy including connecting the elementary student lesson to their behaviors and overcoming barriers as a college student. Reflection prompts were tailored to the Campus Compact (2010) best practices, which uses the reflection guidelines of continuous, connected, challenging, and contextualized as a way to connect fully to the experience and assist in the student development process. Reflection prompts can be found in Appendix B.

After the service-learning experience, students were invited to participate in individual interviews. Interviews with five students were conducted via the online platform, Zoom, to provide convenient scheduling and social distancing. These interviews were voluntary and followed an interview protocol. The interview questions were semi-structured to gather additional information regarding the change experience from the students.

Findings

Through the analysis of the reflections and interviews, student reported influences were categorized into cognitive, environmental, and behavioral influences. Cognitive influences included knowledge, awareness, values, and attitudes. Environmental influences included physical and social factors within the environment.

Behavioral influences included skills, intentions, and reinforcements (Glanz et al., 2015). Self-efficacy influences were described as a separate concept. The social cognitive theory (SCT) thematic findings are summarized in Table 2.

Table 2
SCT Construct Themes

Influences		
	Categories	Units
Cognitive		
	Knowledge	Primary learning outcomes included:
		• Minimum of 5 servings of fruits and vegetables daily
		• How to read a food label
		• Eating regularly and consistently throughout the day
		• Limiting sugar consumption; especially through drinks.
	Awareness	Increased methods to incorporate fruits and vegetables in the diet
		Nutrition-related rationale provided motivation
		Nutrition-related rationale most important to teaching
	Values	Teaching nutrition was important and impactful
		Rationale was valued for behavior change
		Hands-on skill development added meaning to lesson plans
Environmental		
	Barriers	The main barriers for not eating healthy were categorized into three main areas:
		• Time (convenience, cooking methods, frequency of meals)
		• Taste (preference of unhealthy options)
		• Cost (more expensive than junk food)
		Overcoming barriers included:
		• Planning
		• Rationale for change
		• Teaching to 3rd graders

Behavioral		
	Skills	Skill-related changes: • increasing fruits and vegetables • reading food labels • decreasing sugar intake • eating breakfast
	Intentions	All students reported expecting continued and additional nutrition-related changes over next couple months
	Reinforcements	Nutrition change was strengthened by: • Teaching nutrition to youth • Healthy options in home • Athletic involvement

Self-Efficacy
The self-efficacy survey indicated a positive change for confidence in nutrition-related abilities in 10 out of 14 indicators assessed. Survey indicators with 4 or more students (out of 7) indicating positive change (vs. staying the same or decreasing), included: • I can eat at least two different vegetables during my main meal on most days. • I can eat vegetables as part of my lunch on most days. • I can eat vegetables as a snack at least once a day. • I can eat fruit as part of my lunch on most days The measures with the least change in confidence were from areas that were not part of the 3rd grade education objectives including: • I can still eat some fruit or vegetables when I do not have much money. 2 increased, 3 same, 2 decreased) • I can eat fruit and vegetables when I am eating out. (1 increased, 3 same, 3 decreased) Personal connection to the materials and rationale for change were reported as primary reasons for improved confidence in abilities through the reflections and interview responses.

As we turn to the findings, a reminder of the first research question: How do undergraduate students participating in a nutrition service-learning course describe their cognitive, environment, and behavioral influences related to nutrition throughout the course? Beginning with cognitive factors, all students indicated positive changes in their nutrition-related knowledge, awareness, and values. For example, the knowledge factors mentioned as primary learning outcomes by students included the recommended servings for fruits and vegetables, how to read a food label, the importance of eating regularly and consistently throughout the day and limiting sugar consumption (especially from sugar-sweetened beverage intake).

The improvements in these knowledge factors influenced students' awareness of their nutrition behaviors and choices. This was highlighted most through the process of creating lesson plans for third graders.

One student commented:

 "My lesson was over healthy snacks. Through teaching 3rd graders about eating fruits and veggies as snacks and making it fun, I have learned about how to do that more myself."

Another highlighted student comment was,

"I learned the amount of fruits and veggies that I needed and the importance of breakfast. Learning and teaching it at the same time was cool and it helped me think about my behaviors more and start changing some things."

Finally, one student mentioned that making his lesson hands-on, helped him visually understand portion-size. "Using your hand as a guide for portion-sizes and knowing that ½ your plate should be veggies was helpful for me to do this myself."

Most students noted that connecting to the rationale of eating more fruits and vegetables was helpful in motivating them to do it themselves and rationale was most important for them to teach it to 3rd graders. For instance, one student stated, "Learning more about the "why" of eating healthy along with the what to eat was the most important factor to teach to third graders. Learning more about the nutrient's impact in the body." Similarly, another student mentioned how it was most important to teach third graders "...how nutrition helps their body. Not only focusing on weight, that [nutrition] does many other things to improve their well-being. Learning more about nutrients in food and what they do for the body."

Furthermore, improvements in value were described through student reflections and interviews. All students reported they felt that providing the nutrition lessons to elementary students was important and impactful. Connecting to the importance for the nutrition behaviors was meaningful for the delivery of the lessons and the behavior changes for the students. Students mentioned the importance of teaching nutrition to others included prevention of disease, strength, improved academic ability, improved athletic performance, and improved energy. Students also mentioned that skill development through hands-on learning added meaning to their lessons and behaviors. One student wrote about using food labels for learning how to read and calculate nutrients made it more meaningful. Another mentioned that hands-on learning was more

fun and related to their lives. The combination of the cognitive factors of knowledge, awareness, and value were intertwined throughout the experience and influenced one another.

Along with cognitive factors, the influence of environmental factors were also noted during the analysis. The primary environmental factor assessed in this study was overcoming barriers, identified by Bandura (1993) as a primary aspect for measuring self-efficacy. The main barriers to healthier eating included time (convenience, cooking methods, frequency of meals), taste (preference of unhealthy options), and cost (more expensive than junk food). These barriers emerged during the analysis of the student responses and were categorized by the researcher as primary themes. All participants reported the perceived ability to overcome these barriers through planning. Learning the rationale for nutrition changes helped them prioritize nutrition, which was related to planning. Several participants also mentioned that teaching 3rd graders how to specifically improve nutrition behaviors helped them do it themselves.

Finally, all participants reported nutrition-related behavior changes. After analyzing the reflections and interview responses, the themes of skills, intentions, and reinforcements were categorized by the researcher as the primary behavioral outcome areas. Skill development included increasing fruit and vegetable intake, reading labels, decreasing sugar intake and eating breakfast. One student reported,

"learning about healthy eating behaviors definitely had an impact on my life. I began to focus more on my meals and swap the to-go desserts from the dining hall for the fruit to-go."

Another participant shared:

"…before learning more about nutrition and completing the service-learning process, I didn't really know much about nutrition or think that it was that big of a deal in my own personal life. Now, after this, I have noticed myself reading nutrition labels. I have started to care a little more and put more effort into my own health and nutrition. After stressing so much to the younger students that they should care about their own nutrition, it started to hit me that I should be doing the same. Not only to be a good influence, but also for myself".

Many participants reported intentions of healthier eating related to teaching others about nutrition. The service-learning experience helped them make the needed nutrition changes as well. One highlighted quote was, *"For influencing nutrition, in order to educate others, it starts with you. If you're not taking care of yourself, it would be harder for others to believe in what you're teaching or see you as a credible source."*

Additionally, a participant stated, *"teaching a 3rd grader made me think if a third grader can do it, I definitely can."* Finally, one participant stated, *"trying to teach others about health and nutrition forces you (in a good way) to sit down and truly think about your diet and eating habits."*

Participants also reported improved nutrition-related reinforcements in their lives. Reinforcements described by three of the participants included healthier options in their residence for snacks and breakfast items. As noted by one of these participants, "If you

don't have healthy snacks, it makes it extremely hard to make a healthy change."
Additionally, two participants mentioned athletic involvement reinforcing their healthy eating behaviors.

The results for the second research question: How do students describe their nutrition self-efficacy after participating in a service-learning nutrition course?, was a separate analysis related to cognitive factors (Bandura, 1997). This item was analyzed separately, as self-efficacy improvements, specifically, are related to successes and future continuation of the change (Bandura, 1993; Buckworth, 2017; Martinelli, 2002). Self-efficacy measures are influenced through improved perceptions of skill development and overcoming barriers (Bandura, 1993). The survey results from this study indicated a positive change for confidence in nutrition-related abilities in 10 out of 14 indicators assessed. Survey indicators with 4 or more participants (out of 7) indicating positive change (vs. staying the same or decreasing), included:

I can eat at least two different vegetables during my main meal on most days.

I can eat vegetables as part of my lunch on most days.

I can eat vegetables as a snack at least once a day.

I can eat fruit as part of my lunch on most days

The measures with the least change in confidence were from areas that were not part of the 3rd grade education objectives including:

I can still eat some fruit or vegetables when I do not have much money. (2 increased, 3 same, 2 decreased)

I can eat fruit and vegetables when I am eating out. (1 increased, 3 same, 3 decreased)

Personal connection to the materials and rationale for change were reported as primary reasons for improved confidence in abilities through the reflections and interview responses. These responses assisted in the creation of the reflection assignments and interview questions. The majority of the nutrition education with the 3rd grade class was related to fruits and vegetable intake, so narrowing the self-efficacy measures to this area was helpful in gathering data from the undergraduate students.

The reflection and interview responses further support changes in self-efficacy. Most participants reported the primary reason for improved confidence in abilities related to nutrition behaviors was related to personal connection and the rationale for the nutrition change.

One participant highlighted this connection:

 "I care more about nutrition through learning about [it] and then connecting it to my life." Another participant connected to their future profession as a P.E. teacher, supporting the importance of eating healthier now to their future goals: "I think I need to do a better job at adding more fruits and vegetables in. I want to teach P.E. courses and I need to be healthier to teach better."

All participants reported additional improved nutrition behaviors were expected over the next couple of months. This was mostly because of having a break in academics, having athletic events/performance needs, and having healthier options at home with less temptations for unhealthy eating. Two participants mentioned planning more for healthier eating in the spring semester, by practicing healthy eating meal prepping and cooking.

Discussion

The purpose of this study was to deepen the understanding of how service-learning courses might impact nutrition-related behaviors among the students providing the service. Utilizing the major constructs of the social cognitive theory (Bandura, 1997; Glanz et al., 2015), the research questions examined how students participating in a nutrition service-learning course described their cognitive, environment, and behavioral influences related to nutrition throughout the course and how students described their nutrition self-efficacy after participating in a service-learning nutrition course. Based on these constructs, this service-learning course was found to improve self-efficacy, awareness, values, attitudes, and behaviors related to nutrition for all study participants. The experience improved the participants' confidence in making needed nutrition changes and indicated intentioned for continued behavior change post-experience. Self-efficacy beliefs, along with knowledge, goals, perceived barriers, and expected outcomes, work together to influence behavior change (Bandura, 2004).

Nutrition education was provided to student participants through lecture, class discussion, and independent research. Previous research on nutrition courses has shown that education alone has not been enough to influence behaviors (Kelly et al., 2013; Poddar et al., 2010; Richards et al., 2006; Worsley, 2002). Findings from this study show that additional learning objectives among the students were influenced through their service-learning related projects. For example, the process of developing the lesson plans influenced skill development and methods for overcoming perceived barriers to nutrition-related behaviors. The additional skill development and reflective activities related to the service-learning experience can influence behavior change along with meeting the academic objectives. The results from this study are similar to other research showing improved academic objectives for nutrition-related service-learning courses (Gray et al., 2017; Rasberry, 2006), however, they have not been used previously to examine behavior changes related to that knowledge.

Nutrition behavior changes are related to increasing nutrition education along with improving nutrition skills, self-efficacy, attitudes, and values (Worsley, 2002). Findings from this study show that establishing meaning was the most reported influence of related to nutrition behavior change. The "meaning-making" described in this study was related to personal outcomes for needed nutrition changes and strengthening those outcomes with the reciprocal learning in the service-learning experience. The intentional reflective component for service-learning courses connects the learning to the service (Campus Compact, 2010). Using the major concepts from the social cognitive theory for prompts, the reflections were intentional to assess nutrition-related personal factors, environment, and the service-related work. The reflective and reciprocity are meaning-making factors that are already present as a part of best practices for service-learning courses (Campus Compact, 2010). The results from this

study suggest the addition of reflection prompts related to these social cognitive concepts for health behavior change could improve self-efficacy and health-related behavior changes among students.

Furthermore, the addition of reflection prompts related to self-efficacy could enhance the meaning-making connections. Self-efficacy develops through meaningful experiences (Bandura, 2004; Chen et al., 2018). Self-efficacy changes were described by all study participants through skill development, planning, goal setting, behavior changes, and advocacy awareness. The reflection activities enhanced the understanding of the nutrition concepts related to the service-learning experience and self-awareness. Similar to other service-learning courses, this study adds to the literature demonstrating that service-learning experiences allow for students to develop a better understanding of themselves along with the material they are studying (Salimbene et al., 2005, p. 337). Service-learning courses have been shown to be transformative experiences related to improved self-awareness and self-development (Astin et al., 2000; Bandura, 1977). The results from this study extend this idea to include nutrition behavior change through these self-efficacy improvements. Service-learning courses should be used more frequently as a method to influence nutrition knowledge and influence the needed nutrition changes among the college-student populations.

Summary

Although this was a small study in short duration, the findings suggest that service-learning courses can positively impact self-efficacy and personal factors related to nutrition behaviors. More research is needed to further explore nutrition-related changes through service-learning courses and measuring long-term nutrition changes after the service-learning experience. There is also potential for examining other health-related behavior change through the use of service-learning courses.

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Stepping Up to the Challenge: Human Services Students Help their Community in a Time of Need

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ABSTRACT

Research indicates that food insecurity among college students has been on a steady incline. The COVID-19 pandemic has intensified economic vulnerabilities, which has led to increased food insecurity among college students due to the closure of campus resources and high unemployment rates in jobs that college students typically hold. Universities have long recognized the need for on-campus pantries and the institutions' role in preparing students to apply the knowledge learned in their courses in real-world settings. This article uses a case study to illustrate how one university worked with service-learning students in its Human Services department to provide food support to the campus community by becoming essential workers during a crisis. This created a sustainable solution to improve the quality of life for an entire university community and provided Human Services students the opportunity for applied experience and professional growth and development.

During the recent COVID-19 pandemic, communities in the United States have experienced social upheaval, widespread illness, and economic challenges. Before this pandemic, universities increasingly have been called upon to contribute meaningful development projects within their communities. As a result, universities recognize the need to prepare students to actively apply the knowledge learned in their courses beyond the classroom by assisting and facilitating the development of surrounding communities. Beyond the benefits provided to the community, such engagement also provides students with real-world experience. This opportunity can positively impact student learning and professional development and contribute to the research and teaching programs of the university (Fullerton, 2015).

Human Services programs are two to four-year degree programs at numerous colleges and universities throughout the United States. The National Organization for Human Services (NOHS) characterizes the broad field of Human Services as "uniquely approaching the objective of meeting human needs through an interdisciplinary knowledge base…and maintaining a commitment to the overall quality of life of service populations" (NOHS 2021). Students in this academic program are required to study and think critically about society's problems while simultaneously assessing their place within the larger social structure. At the heart of these programs are service-learning sequence courses in which students complete service hours in the field. Through service-learning with faculty supervision, students apply what they have learned in class to real-world settings from the first day in the program. The scope of Human Services programs is broad and encompasses skills that universities can leverage to fill

community needs gaps. The idea of the relationship between Human Services students and community development is simple: students take collective action to generate solutions to common problems. The role of the Human Services student is to have an important voice in helping university communities overcome the barriers to necessary change and provide the energy for transformation, empowering individuals with knowledge, resources, and capacity to strengthen their communities.

COVID-19 has placed Human Services students in the front-line of the pandemic in terms of helping provide numerous essential services in greater demand from the healthcare crisis. One such service area is that of providing food support to the campus community. As part of their future profession, Human Services students often generate community improvement programs and development projects. As part of their coursework, students within the Human Services Delivery and Administration (HSDA) program at the University of North Georgia acquire the knowledge and capacity to offer various resources to help the surrounding community develop solutions and create opportunities to grow and succeed. Students within the HSDA program may choose to complete their service-learning at the campus pantry, which helps the university operate this resource without using state funds. Additionally, these students have the ability to develop and run campus food pantries and have the grant writing and fundraising skills to support a pantry long-term. This creates a sustainable solution to improve the quality of life for the university community.

College Students and Food Insecurity

Over the past decade, food insecurity among college students has been a growing concern, as the number of students reporting hunger has increased. Food insecurity is defined as the limited or uncertain availability of nutritionally adequate food or the ability to obtain foods in socially acceptable ways (CUFBA, 2020). The College and University Food Bank Alliance (2020) reports that 30% of college students are food-insecure, 56% of food-insecure students are employed, 75% of food-insecure students receive financial aid, and 43% of food-insecure students are enrolled in some type of meal plan. In addition, 36% of university students and 51% of community college students are housing-insecure, and 14% of students are homeless (Goldrick-Rab et al., 2018). The growing cost of tuition, medical care, books and supplies, transportation, and living expenses, results in students often having to choose between paying bills or purchasing food. Many students are forced to leave college without obtaining degrees, and most undergraduates who leave college point to financial concerns as the primary cause (Johnson, 2009). Today, students need more support from universities in meeting basic needs than they are receiving. One way of addressing this lack of support is through the emergence of campus food pantries.

Food Insecurity during COVID-19

Research indicates that college students have higher rates of food insecurity than the general population (Bruening et al., 2018). Literature suggests that, before the COVID-19 pandemic, 1 in 3 college students experienced food insecurity (Laskea et al., 2020). The COVID-19 pandemic intensified economic vulnerabilities, which increased food insecurity among college students due to the closure of campus resources and high unemployment rates in jobs that college students typically hold. The Pew Research

Center (2020) states that 46% of adults ages 19-29 were laid off because of COVID-19 in the months following the first known cases of the virus in the United States. Additionally, college students are less likely to have health insurance and cannot afford medical care, especially first-generation college students (Riddle et al., 2020).

Moreover, other key demographic groups, including women, Black and Hispanic adults, adults under 30, and those who have not yet obtained a college degree, are among the most likely to suffer financial hardships, such as the inability to pay for rent or mortgage (Parker et al., 2020). Housing insecurity among college students was emerging as an issue before COVID-19. This pandemic exacerbated the struggle.

Another barrier to food security for college students is that many cannot access federal food assistance programs, such as Supplemental Nutrition Assistance Program (SNAP), due to long-standing student restrictions (Freudenberg et al., 2019). In 2019, the Gainesville campus Food Pantry of the University of North Georgia (UNG) became a provider for GNAP (Georgia Supplemental Nutrition Assistance Program, Georgia's version of SNAP) clients and offered the service of registering clients for the program. However, only approximately 20% of college students currently meet the eligibility requirements and receive GNAP, as the program has strict work requirements that often disqualify students. The GNAP requirement of employment has been particularly challenging for college students to meet during COVID-19. In addition, most research suggests that college students possess a lower level of food literacy. Food literacy is defined as the ability to access, process (food skills), and have a sense of supportive health regarding food systems (Cullen et al., 2015). Collectively, these issues place students in a high-risk category for food insecurity, especially during COVID (Owens, et al., 2020).

Intent of this Paper

This article is primarily a conceptual exploration of the relationship between Human Service students and their community during a time of stress. We use a single case of a campus-based food pantry and its student workers during the COVID-19 pandemic as an illustrative case. While this paper does not make full use of the case study method, as described by Yin (2002), we assert that the example described here illuminates the dynamic relationship between students and the greater community. It may also provide a partial template for other campus groups seeking ways to help their local communities.

History and Usage Trends of the Food Pantry at the University of North Georgia (UNG)

The creation of the UNG Food Pantry was a direct result of the advocacy efforts of faculty and students in the Human Services program on the Gainesville campus of the university. It is not uncommon for students in Human Services programs to come from the same populations that most need direct services, and they have often benefited from the organizations that eventually employ them. In 2015, a faculty member was alerted to classroom efforts to raise money for students in need. The faculty member worked with students to assist in obtaining needed resources. It quickly became evident that food insecurity on campus went well beyond this single student. As a result, an informal Pantry was set up in a faculty member's office and primarily served Human Services students; however, the need for a more formal, larger pantry was

clear. Human Services faculty-initiated an effort to establish a formal Pantry and presented a written proposal to the University's Presidential Cabinet. After a year of research and negotiation, the President's Cabinet granted approval and the Pantry, stocked with shelf-stable items, opened on the Gainesville campus in spring 2016. By the end of summer 2016, pantry workers saw an increase in the facility's utilization by students, staff, and faculty members. The Pantry, which had previously relied on donations from the campus community, partnered with two local food banks to provide a more stable supply of food and other items. By the beginning of 2017, the Food Pantry saw a further increase in use and the need to have a stable labor force, and the need to add perishable items became evident.

The Gainesville Campus Food Pantry has now been replicated on 4 of 5 UNG campuses. However, the organizational structure of the Gainesville Campus is, by design, unique. The original vision for the Pantry was that it would be faculty-led but run primarily by Human Services students, including the Human Services Association, a student club on campus. During the first two months of operation, the Gainesville Pantry was staffed entirely by Human Service student volunteers. In late May and early June 2016, Pantry-staffing hours were offered as an internship and service-learning opportunity for Human Services students. This structure provided unique challenges and opportunities but has ultimately been a significant part of the Pantry's success.

When the COVID-19 pandemic began, many agencies that benefited those who were food insecure shut down. Students were not allowed on campus. However, the UNG Food Pantry was able to have Pantry workers classified as essential workers and continue providing services through the Pantry. As a result, the Pantry served more people than we had before the pandemic (prior to COVID-19, the Pantry served an average of 107 individuals monthly). Essential workers kept the Food Pantry open four days a week, including one paid employee and six volunteers.

Usage Trends of Food Pantry @ UNG (with COVID-19 period highlighted)

Persons served

Total pounds of food
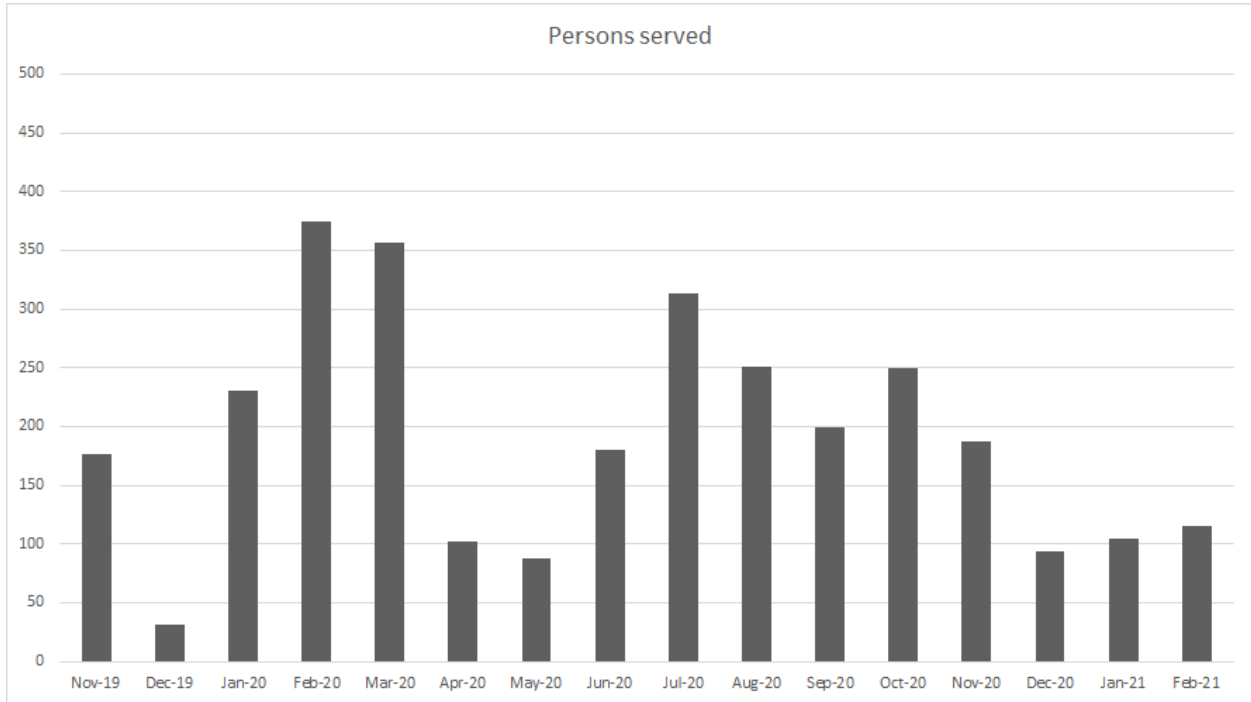
Changes made during COVID-19 at UNG

When college campuses began to close in March 2020, it became vital for the UNG Food Pantry to remain open for the community. We requested to remain open, and employees asked to be classified as essential workers. Since the pantry is deemed a nonprofit organization, permission was granted, running as part of the UNG Foundation. As part of the agreement with the University, we were asked to provide curbside delivery only, in alignment with social-distancing protocols. Human Services workers developed an online form that allowed clients to indicate needs specific to their families. The link to the form was placed on all of the Food Pantry's social media outlets and linked to a QR code posted at all entries and exits to the building which housed the Pantry (which had been locked at the beginning of COVID). This solved multiple issues for the Pantry. It allowed us to remain operational during this time of need for our community. It also allowed a more convenient way for individuals to get the items they needed with a greater degree of discretion.

Additionally, the Human Services students gained critical knowledge of how to operate a nonprofit organization on a day-to-day basis. New skills learned included coordinating volunteers, the basics of fundraising and promotion, and assessing outcomes of the overall program distribution during times of crisis. The students also experienced, viscerally, the importance of being an essential worker.

Payoff to the Community

Prior to COVID, the Gainesville Campus Food Pantry of UNG took a very personalized approach to services offered to the community. Typically, first-time clients would be provided with a Pantry tour and were encouraged to select the items they needed. The Pantry on the Gainesville campus is set up to evoke the aisles of a small grocery store, and the ability for clients to "shop" autonomously helps them maintain their dignity at a time when that may be in short supply, given their current circumstances. This approach also allows them to choose items tailored specifically for their family, instead of receiving a generic box of household staples that may or may not be appropriate for their needs.

Feedback gathered from Food Pantry clients indicated the benefit of keeping this resource safely open and available during COVID lockdown. One client, who described herself as a single, divorced mother of two and a full-time college student, shared that she appreciated the setup of the Pantry and the approach of the student workers who helped her.

> *The idea that I had some say as to what I wanted to shop for….to select items for what our family really needed was such a foreign concept to me. I was met with a welcoming smile and a tour of the pantry. I was awestruck. I genuinely felt at that moment I got a little bit of my dignity back. I was able to choose what I wanted to put in my bag... I wasn't powerless, it was okay to take an item off the shelf and bring it home. When I would come home and bring the occasional treat here and there it almost felt like a present to the whole family. We would even gather at the kitchen island with appreciation.*

During COVID, although the Pantry was physically off-limits to clients, the personalized approach continued through the clients' use of online forms that allowed clients to "check off" the items most appropriate for their families. The numbers of clients served by the Food Pantry immediately declined (although it did not stop) as soon as the campus was locked down, but picked up again once adjustments were made to ordering and delivery procedures. Also, the push for greater publicity allowed more community members to become aware of this resource at a time of great need. By mid-summer 2020, the Pantry saw enormous growth in the number of clients served.

Payoff to the Essential Service-Learning Student Workers

As a university-based Food Pantry, we uphold our mission of educating students while continuing to help the community. Becoming classified and serving as "essential" workers during the most significant health threat to humanity in a century presented an extraordinary learning opportunity. One student worker described the situation dramatically:

Twenty-twenty was … [a] sudden change in how we operate in day-to-day life. Many clients that were already struggling to make it found themselves in more [desperate] need. I have seen many people come to the food pantry who have a deficit of financial means in some way. That is not to say that they do not work hard, maintain a job, or manage their money wisely, this is because of a bigger issue regarding the economic opportunity available for full-time college students, especially those with families before entering[the] University.

The same student describes the changes they saw as a result of COVID:

This pandemic exacerbated this [food insecurity] issue and brought to light many more. With the virus, sending those who had no choice but to work into situations that compromised their life was very disheartening. Many of the people that came into the food pantry were just coming out of quarantine or had just been put on quarantine. Many of those same people do not receive support from family or have a large friend group they could depend on for support. In the pantry, I saw many individuals who did not receive any unemployment, were not eligible for the stimulus, and had no experience of navigating the social support system.

Another student worker described the experience of working in the pantry during lockdown:

A typical day in the pantry consisted of working through the various online orders, preparing them for curbside pick-up, and sending out follow-up emails confirming their orders. This would be from the time I opened the pantry to close, and we were open four days a week. The one day of the week we were closed was used to restock the pantry. During the first few months of quarantine, I saw the food bank look almost completely cleaned out, and there was a time when I could not order anything for the pantry. Fortunately, our University of North Georgia community cares about our mission, and we had massive

donations. This was most helpful because, without these donations, it would have been impossible to serve the community.

As educators, we are heartened that our Human Services students not only rose to the challenge of serving their community in times of extraordinary need but that they clearly articulated the perspectives of Human Services providers that we promote in their courses.

Community helping Community

In addition to providing opportunities for professional growth for Human Services students, the Food Pantry benefits from the labor and dedication of a built-in, committed group of student workers. Unlike many internships, and work-study positions, which may or may not align with students' academic or career interests, Human Services students have already decided to enter a helping profession. Rather than perceiving work at the Food Pantry as a chore, many service-learning students appreciate being involved in a practical application of the concepts they are learning in the classroom to the direct benefit of their campus and community. The use of the Human Services program and its students allows the University to provide much-needed resources to struggling members of our campus community without direct financial investment. By tapping into the resources of the Human Services program, including student energy, passion, and knowledge of helping others, the UNG Food Pantry allows our community to function effectively by utilizing our internal resources to meet the basic needs of our student population and the surrounding community.

Discussion and Conclusion

While the example of the response of UNG Human Services service-learning students does not represent the entirety of crisis intervention or mutual aid in action, it does serve as an illustrative case of what is possible when motivated students work toward meeting community needs. Young adults are initiating calls for significant progress towards mutual aid, social justice, and social equity to take responsibility for caring for one another and to change social conditions. The Human Services students at UNG have united in solidarity-based support to address food insecurity rather than leaving individuals to fend for themselves. This generation of college students has been described as the most educated, socially active, and technologically-driven generation in history (Fry and Parker, 2018). These are all characteristics that drive community development and social innovation. Students working at the UNG Food Pantry have organized this university resource and turned it into a self-directed nonprofit in which all students have the power to influence the mission and vision of the Pantry. This has led to students becoming accountable and responsive to the complex needs of their community.

This effort is the very definition of mutual aid, which Spade (2020) describes as when people get together to meet each other's basic survival needs, with a shared understanding that the systems we live under are not sufficient to do so. Together, the community can meet the needs. Mutual aid efforts often arise during moments of crisis, which is precisely what happened on many college campuses during COVID. At UNG's

Gainesville campus, our population is composed of nearly forty-percent racial and ethnic minorities. Gainesville, GA, is considered the chicken-processing capital of the United States; as such, we have a high immigrant and low SES population. Thirty percent of our student population are first-generation students, and another thirty percent receive Pell Grants. Many of our students face homelessness and food insecurities. Students working at the Pantry understand that the situation and social structure are creating this crisis for our community, not the people suffering under it. This attitude clearly reflects the perspectives of Human Services providers that we articulate in their courses, and the UNG Food Pantry demonstrates that the students have taken this to heart. Students recognize the inequalities on campus, including the high prevalence of food insecurity and the need for action on college campuses.

Utilizing Human Services students is a way to develop grassroots efforts and evaluate strategies on university campuses that assist in filling a gap that is becoming more widespread. Additionally, this experience of responding to the pandemic crisis will prepare Human Services students for future crises and position them to organize and respond when called upon quickly. Our study suggests that Human Services students' intervention on college campuses can assist with such crises and will likely yield a sustained decrease in economic hardships for students, although further study of different cases would be informative.

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The Impacts of Service-Learning Experience: An Exploratory Case Study of Alumni Perspective

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As an emergent pedagogy embraced by the Asian higher education institutions since the beginning of the 21st century, service-learning has reframed the learning goals and approaches to connect students with the society (Ma, Chiu, Wei, 2019). While different institutions in different regions adjust service-learning to its own social and cultural context, this study focuses essentially on a service-learning project with which students apply their academic knowledge and skills to serve the community. Along with service, the experiential learning cycle, experience-reflect-think-act, proposed by Kolb (1984), was incorporated as an indispensable part of the project. Through the combination of active involvement in serving and the experiential approach to reflect on the learning process, empirical studies had indicated positive outcomes in learners' educational experiences, personal growth, community engagement, and civic responsibility (Hullender, Hinck, Wood-Nartker, Burton, Bowlby, 2015; Molee, Henry, Sessa, & McKinney-Prupis, 2010; Olsen & Burk, 2014; Xing & Ma, 2010).

Globally, there have been increasing findings on the potential gains of students when participating in service-learning, including better academic performance (Tross, Harper, Osher, & Kneidinger, 2000), enhanced communication skills, organizational skills, problem-solving skills, social competence (Vogelgesang, & Astin, 2000), leadership skills (Santulli, 2018), civic engagement (Solomon & Tan, 2021; Steinberg, Hatcher, & Bringle, 2011), and perspective transformation (Bowman, Brandenberger, Mick, Smedley, 2010; Hudson, Serra, Shappell, Gray-Girton, Brandenberger, 2017). In addition, there were studies documented that the duration and intensity of service-learning experiences

ABSTRACT

This article reports on the self-perceived impacts of service-learning experiences from the perspective of alumni who graduated from a technical university in Taiwan. Drawing on the alumni responses in a focus group interview, the study investigated how the respondents perceived the impacts of participation in a service-learning project. Findings suggest that these experiences fostered a lasting change in the alumni personal development, communication skills, ability to adapt and persevere, learning attitude and commitment to service. In addition, the alumni reported not just these practical and personal benefits derived from the service-learning experiences, but also critical transformation that empowered them to face challenges after college.

had positive correlation with these academic, psychological, and social development (Astin & Sax, 1998; Mabry, 1998).

Currently, the majority of the research discussion of service-learning remains at the immediate impacts on the learners. Comparatively fewer studies have investigated the long-term effects, particularly after students graduate. There is a need for scholars and practitioners to examine if service-learning have lasting effects on the alumni. In US, both smaller scale and larger scale of research could be found. For instance, Fullerton, Reitenauer, and Kerrigan (2015) explored the long-term effects of a senior service-learning course through interviews with 20 alumni and revealed the transformational effects of service-learning experience on multiple levels of the alumni's life. In a larger scale research, Johnson & Martin (2017) examined the short-term and long-term effects of alternative break through online survey of the 147 alumni from various colleges and concluded that the positive gains from alternative break sustain after graduation. In contrast to the available US research on long-term impacts of service-learning, studies in an Asian context are limited. In addition, while most service-learning courses last for one semester, very few studies focused on the longer service-learning engagement. To fill in such gap, this article presents a case study examining the long-term impacts of a service-learning project on alumni who participated in it for at least 2 years.

The Study

This study aimed to diversify the continuously growing research in terms of the long-term impacts of service-learning through a naturalistic inquiry paradigm. Based on the focus group interview (as suggested by Vaughn, Schumm, & Sinagub, 1996) of the alumni, this case study addressed the following questions:
1. What were the perceived impacts of the service-learning experiences on the alumni's university life?
2. What were the perceived impacts of the service-learning experiences on the alumni's life after graduation?

Context

This service-learning project was funded by Taiwan's Ministry of Education from 2009 to 2019 aiming to shorten the digital divide between the urban and rural areas. The technical university, located in the metropolitan area of northern Taiwan, is over 300 km away from the service location, Taitung County, in southeastern Taiwan. A total of 230 students voluntarily participated in this service-learning project, providing total on-site service time of approximately 15,000 hours. Partnered with several local community entities across Taitung County, services were provided through 2 major approaches: (1) provide summer and winter camps that teaches children, teenagers, and adults the fundamental information technology skills; (2) develop online marketing platforms and provide online marketing services to promote local produces.

Setting and Participants

When students participated in this service-learning project, their ages were between 18 and 22, in their freshmen to senior years. While they were engaged in this project, the impacts of the service-learning were evaluated through their self-reflections during and immediately after services. In a past study (Lei & Huang, 2013), the researchers had found positive gains of students' development, particularly in communication skills and active learning motivation. However, after these students graduated, when they look back on the service-learning experiences, what do they perceive as the impacts on their university life? What do they perceive as the impacts of the service-learning experiences on their life after graduation?

As a start to explore these two research questions, this study utilized purposive sampling technique focusing only on the core team members (e.g., camp director, camp section leader, online marketing coordinator) of this service-learning project. Because the project is volunteer-based, students' involvement varied. Some students only participated once, which would only be several weekends during a semester or one to two weeks during summer or winter break. To be a core team member, on the other hand, students were committed for 2 consecutive years or more. Participants for this study were therefore recruited from the online network of alumni who formerly served as the core team members in the service-learning project. A total of 9 alumni, 3 males and 6 females, responded and a focus group interview was conducted.

Data Collection and Analysis

Using the sampling strategy described, participants of this study were contacted and invited for a 120-minute focus group interview about the impacts of their college service-learning experience. The researchers, one as the primary moderator and the other as the assistant moderator, used the key questions (figure 1) as outlines to conduct an open-ended investigation.

1st Hour Theme: Service Learning Experiences in University
◆ Primary question: *What were the impacts of service learning experiences on your university life?*
◆ Follow-up question: *What were the most memorable incident(s) associated with the perceived impacts?*
◆ Ending questions: *Is there anything else you would like to talk about?* *Would you like to add to what is already shared?*
2nd Hour Theme: Impacts of Service Learning Experiences after Graduation
◆ Primary question: *What were the impacts of service learning experiences on your life after graduation?*
◆ Follow-up question: *What were the most memorable incident(s) associated with the perceived impacts?*
◆ Ending questions: *Is there anything else you would like to talk about?* *Would you like to add to what is already shared?*

Figure 1. Focus Group Interview Outlines

The interview was audiotaped and transcribed for analysis. The predominant themes in the transcription were identified and data was coded according to these themes. The two researchers thoroughly discussed these preliminary themes and coding units until the consensus was reached. Afterward, the researchers examined the meaning and connections of the themes to prepare for the final stage of analysis, the interpretation of the data.

Findings

Three male and six female alumni participated in the focus group interview. At the time of the interview, four participants (45%) had graduated 5-8 years prior to the study, three (33%) had graduated 2-5 years, and the remaining two (22%) had graduated within 2 years. The committing period in the service learning project during college ranged from 2 years (56%), 3 years (22%), to 4 years (22%).

Table 1. Participant Information

Partici pant	Gender	Graduation Time	Service Time	Core Responsibility
R	Female	5-8 years	3 years	Camp: Director Online Marketing: Coordinator
S	Male	5-8 years	3 years	Camp: Director Online Marketing: Coordinator
N	Female	5-8 years	2 years	Camp: Art Section Leader
Z	Female	5-8 years	2 years	Camp: Member Online Marketing: Platform Operator
W	Male	2-5 years	4 years	Camp: Director Online Marketing: Coordinator
H	Male	2-5 years	2 years	Camp: Assistant Camp Director, Curriculum Planning Leader Online Marketing: Social Media Operator
T	Female	2-5 years	2 years	Camp: Financial Section Leader Online Marketing: Platform Operator
Y	Female	2- years	4 years	Camp: Director Online Marketing: Coordinator
J	Female	2- years	2 years	Camp: Member Online Marketing: Platform Operator

When the participants recalled and described their service-learning experiences in college, all of them reported that joining the service-learning project was their first initiative to step out of their comfort zone – a school- and part-time-job-centered life. The project allowed them to step into a totally different environment in terms of culture, value and lifestyle from their urban environment. They were exposed to a variety of people in terms of age, vocation, and ethnicity. They had a sense of accomplishment that couldn't have been granted from the school work nor the part-time job. Findings from the thematic analysis are organized into the following main impacts on the alumni's life during college and after graduation: enhanced communication skills, growth in adaptability and perseverance, active learning attitude, and commitment to service. Each of the categories is illustrated with excerpts from the interview responses.

Enhanced Communication Skills

All 9 alumni reported that the service-learning experience enhanced their communication skills. When they engaged in the service-learning project, they must first communicate with the community entity to understand the locals' need and to set a goal for each mission. After a clear goal was set, they must communicate with the teammates while preparing for the mission, whether the computer camp or the produce promotion. When executing their plan, they must learn to communicate with the service recipients.

One alumnus describe how he learned to be a better communicator through the service-learning experience:

> *"The service-learning project required a massive amount of communication, whether with the teammates, the local community, or the service recipients. At first, I couldn't communicate well with so many different perspectives and opinions. The miscommunication often lead to the delay of the progress and even the misunderstanding among the teammates. After so many attempts, I gradually get the hang of how to listen to diverse opinions, clearly expressed my opinions, and collaboratively came up with an optimal way."* (H)

The enhanced communication skills not only impacted them during college, but also prepared them for the workplace after graduation. As one alumni noted:

> *"In the service-learning project, I learned how to communicate with different people who look at things from different angles from me. I carried those communication experiences to my workplace, which has been a great help to my job."* (R)

The ability to communicate with diverse people to accomplish a common goal was one major competence cultivated in the service-learning project and was carried over to the alumni's life, such as in the workplace, after graduation.

Growth in Adaptability and Perseverance

Seventy-eight percent (7 out of 9) of the alumni recalled their growth in adaptability and persistence through the service-learning experiences. From the planning stage, execution, to the completion of each mission, it required collaborative effort of the service-learning team and the local entities. However, things didn't always go as planned. There could be all sorts of unexpected problems and obstacles. They learned to come up with alternatives to adapt to the situations, sometimes at a moment's notice. For them, it was a valuable experience to face the obstacles and challenges together without giving up.

One alumnus remarked that, with the real-world context, the service experience prepared her to be more adaptive and persistent:

> *"I need to keep trying and learning to adapt when unexpected things happened. There were a lot of negotiation and coordination going on. I learned to have backup plans, to make rearrangements, and most importantly, to accomplish our mission no matter how stressful I felt. … This was so close to the real world we later stepped into."* (N)

The ability to adapt and persevere, when acquired, could also be carried over to the alumni's life after they graduated. Another alumni stated that her gains in the service-learning project had boosted her confidence in herself to adapt and persevere in new situation:

> *"What we achieved under such intense circumstances helped me when I face enormous amount of stress now. The experiences pushed me to try something that I wouldn't have necessarily tried or thought I would have been able to do. So now when I face an unexpected circumstance, I would tell myself that I was capable then, and I am capable now."* (T)

The potential to adapt and persevere to real-world challenges was another competence fostered in the service-learning project and has a lasting impact on the alumni's life.

Active Learning Attitude

Sixty-seven percent (6 out of 9) of the alumni reported that the service-learning experiences impelled them to be a more active learner. Because of the collaborative nature of this project, each team member was assigned a role with corresponding responsibilities. In order to achieve the common goal, each individual had to responsibly accomplish their parts. A lot of times it required them to explore new realms, such as writing a proposal, making a marketing plan, selling unfamiliar produces, holding workshops for locals, etc., and they managed to apply what they learned in class or learn new skills on their own. An alumni described his experience from a passive learner to an active learner:

> *"I didn't pay much attention in class, and I didn't know much when I first joined the service-learning team. … But I learned it from working with others that when I'm assigned a task, I must learn to do it and accomplish it. Year after year, I learned to do so many different tasks and eventually was able to organize a camp by myself."* (W)

When this alumnus talked about the impact of service-learning experience on his life after graduation, he mentioned:

> *"I had quite a dramatic change because of the service-learning experiences. I found myself able to set up a goal and motivate myself to learn it. This is a great asset to process. I still remember when I started my first full-time job, it was challenging but I learn diligently. I had four to five learning goals accomplished in one year."* (W)

In addition to the impact on their workplace, the active learning attitude could be seen in how they were more willing to further step out of their comfort zone and attempt to new experiences. As one alumnus stated:

> *"I had never thought about going to so many places and trying so many new things. After Taitung, I participated in a national competition of marketing, done my internship abroad, and even attended a conference in USA. I have become open to try and learn new things. This is the major influence of the service-learning experience."* (Y)

The active learning attitude acquired during the service-learning experiences has positively changed the alumni's self-perception in college and afterward.

Commitment to Service

Forty-four percent (4 out of 9) of the alumni had taken further action to engage in community service after participating in this service-learning project. Some have served in their neighboring communities, some continued to go back to Taitung to serve, and one even joined an oversea service project. These alumni mentioned that the service-learning experience has made them not only connected to Taitung but also aware of what they could contribute to others.

> *"I love Taitung. It's like my second hometown. People there are very sincere and passionate. I learned so much every time I was there. I wasn't just giving but also gaining. I became more outgoing and open-minded. I still keep a great relationship with the locals and continue to serve in Taitung even after I graduated."* (S)

One alumnus mentioned that the service-learning experience had motivated him to look for a job in a NGO, Teach for Taiwan, and some other social enterprises. Although it didn't work out, he still planned to have a job that could contribute to society.

> *"Right now, I still contact the [Taitung] locals from time to time. … Recently, I go to the stray animal shelter on the weekends. … I have been working in a bank. Once I saved enough money and have economical foundation, I will try to look for a job in a NGO or a social enterprise. That's my ultimate goal."* (H)

For these four alumni, the sense of connection to Taitung and the wiliness to volunteer their time to serve others were the lasting impacts of their service-learning experiences.

Discussion

The findings support the associations between the service-learning experience and the students' personal growth while in college and after graduation. Specifically, these alumni who committed a minimum of 2 consecutive years in service reported transformative changes in terms of communication skills, adaptability and perseverance, active learning attitude, and commitment to service. These long-term impacts on personal development were also documented in earlier studies in other contexts such as participation in alternative break (Johnson & Martin, 2017) and service-learning courses (Astin, Sax, & Avalos, 1999; Ma, Chan & Chan, 2016; Newman & Hernandez, 2011).

As Perry & Perry (2015) pointed out, when students intensely involved in service-learning, the challenging nature of working with diverse populations in the real-world scenarios fostered the active and collaborative learning. When the students collaborated with each other and successfully solved the unscripted problems, the sense of fulfilment and meaningful relationship began to transform their perception. With increased self-perceived efficacy, they were empowered with positive attitudes and enhanced abilities to handle real circumstances they would encounter during and after college. The findings from this case study were clearly resonant with Perry & Perry's view, evidenced by alumni's personal development in communication skills, adaptability, perseverance, and active learning attitude while in college and after graduation.

It is worth noting that the technical university in this study is not the top-notch university within the higher education realm in Taiwan. It is common that students tend to possess a self-identity closely attached to the ranking of the university they are in (Huang, Chen, & Chien, 2014). Thus it was not surprising that the students in this case study generally held a lower self-efficacy expectations prior to their positive service-learning experiences. Gonsalves and her colleagues (2019) stated, "efficacy expectations affect an individual's confidence in his/her abilities to approach a task and persevere through similar challenges (p.19-20)." When these students successfully persevered through the challenges and produced favorable outcomes in their service-learning experiences, it further raised their self-confidence and efficacy expectations. Reeb (2006) pointed out that with higher self-efficacy expectations for service-learning, students were more likely to commit to service-learning and to make greater impact. In this case study, the transformed self-efficacy expectations could be the reason the students were willing to commit to service for longer period of their time in college. In return, it raised their self-perception and self-confidence of what they could achieve later in their life outside of the school boundary.

Conclusion

Eyler and Giles (1999) stated that the service-learning experiences cultivate the genuine perspective transformation of students' intellectual, personal, and civic development. One part the current study adds to the existing studies on the long-term impacts of service-learning is to focus on the longer service commitment and its sequential influences. The focus group interview brought the alumni back to fully reflect

on their service-learning experiences and revealed the transformative effect on their self-efficacy and the subsequent actions because of the transformed perspectives. More specifically, it seems clear from the study that the service-learning experiences of these core team members were effective in raising their self-efficacy expectation, which in return help them take an active role to face the challenges in life, to explore the unimagined possibilities of their future, and to continuously contribute to the society. This important change in mindset in terms of their increased self-confidence and positive self-identity development is a crucial empowerment to students, particularly those who consider themselves academically less competent.

Although the present exploratory case study involved only a small sample of alumni, it reveals the lasting impacts of service-learning on service participants after college. Given the promising outcomes of long-term commitment in service-learning, practitioners could consider encouraging students to devote to longer service term and deepen the community engagement. Future research could investigate how to further incorporate critical components of service-learning pedagogy to bring life-long impacts on service participants not just on their personal growth but also toward more socially contributive action.

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Impact of Community-Based Service-Learning on Undergraduate Students Self-Authorship

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Research on college students' experiences tends to focus on their tangible takeaways rather than their introspective conclusions gained from critical reflection (Barber & King, 2014). Students thus often define their experiences as summaries or concrete observations rather than constructive conceptualizations (Dyment & O'Connell, 2011). This pattern may be attributed to current college learning atmospheres. Universities expect students to develop and utilize critical reflection skills, but professors provide assignments focused on assessing knowledge and comprehension rather than asking for students' synthesis of new thoughts (Dyment & O'Connell, 2011; King et al., 2009). Correspondingly, few students learn how to reflect critically (Barber et al., 2013; Dyment & O'Connell, 2011; Hart Research Associates, 2015) and remain externally defined, or reliant on parents, educators, and other voices to make decisions (King et al., 2009). In contrast, to be internally defined, also known as being self-authored, refers to one's ability to individually develop a sense of personal, relational, and world views (Baxter Magolda; 2001 Kegan, 1994). Kegan (1994) initially proposed that moving from being externally defined to internally defined occurs along a continuum. Additionally, becoming self-authored prepares individuals to become more productive citizens, to better understand large scale world problems and abstract complexities of life, and to cultivate relationships with diverse individuals (Barber et al., 2013; Baxter Magolda, 2008; Kegan, 1994; Pizzolato, 2008).

ABSTRACT

This qualitative study utilizes a phenomenological approach to assess impact of education-based service-learning experience on undergraduates' self-authorship process at a 4-year university. Research questions focused on implementing Boud et al. (1985) model of reflection as a framework for journaling; identifying participant variables indicative of self-authorship; and deciphering if a combination of service-learning activities and participant variables elicit self-authorship growth. Themes determined from participants' journal entries indicate service learning experiences combined with critical reflection elicit development in inner voice, or at minimum, engage students in recognizing internal dialogues. Several noted the benefit of classroom activities in helping them make meaning of experiences. Others drew on past experiences to shape how they acted and thought as a teacher for the students they were helping. Many noted they found it impactful or disheartening to learn about their students' backgrounds; this internal conflict often served as an opportunity for participants to re-consider their worldview, at least from an educational sphere. Even though many enrolled to meet the university's experiential learning course requirement, participants overall appeared to develop a stronger inner voice.

Experiential Learning

David Kolb (1984) proposed a four-step model of experiential learning theory as an integration of the behavioral and cognitive learning theories developed by John Dewey, Jean Piaget, and Kurt Lewin. Dewey, Joplin, and Piaget posit that all learning is experiential (Grady, 2006), as individuals often formulate knowledge from their life experiences (Kolb, 1984). Piaget further poses the viewpoint that all learned knowledge can and should be connected back to existing knowledge; any individual's baseline of knowledge thus serves as the catalyst for reflection and continued learning (Kolb, 1984). As defined by Kolb (1984), learning is "the process whereby knowledge is created through the transformation of experience" (p. 38). Oftentimes, learning is associated with the classroom, where teachers aim to transfer knowledge to their students. However, to some degree, all the above theorists proclaim learning to be the product of critical reflection stemming from the synthesis and connections made from concrete experiences (Dewey, 1938; Lewin, 1951; Kolb, 1984; Piaget, 1972).

Service-learning and Developmentally Effective Experiences

Educators and universities alike draw from Kolb's (1984) experiential learning theory when creating hands-on learning, study abroad trips, and internship experiences. University-level service-learning (SL) courses provide students with yet another opportunity to engage in this model. Specifically, SL courses allow students to participate in activities that allow them to meet community needs, reflect on the experience to engage in personal development, and develop a better sense of the importance of civic engagement (Bringle & Hatcher, 1995, 2009). Ash et al. (2005) echoes the sentiment that SL provides an adequate environment for students to expand their learning beyond the classroom. Eyler et al. (1996) further substantiates the benefit of SL by defining critical reflection as the component needed for permitting this deeper understanding of learning.

Specific instances in which students engage in these higher levels of learning that promote internal growth are termed developmentally effective experiences (DEEs) (King et al., 2009). As defined by King et al. (2009), DEEs must impact an individual's meaning-making orientation, or the way individuals view themselves, others, and the world (Barber & King, 2014). Service-learning and DEEs also allow students to further identify and confront the bounds of their values; develop deeper awareness and perspective of social, civic, and diversity issues; and take greater responsibility for the pursuit of external, real-world learning experiences (Ash et al., 2005; Jenkins & Sheehey, 2011; King et al., 2009). Thus, as a result of service-learning and DEEs, students engage in the self-authorship process (Kegan, 1994; King et al., 2009; Myers, 2020).

Self-Authorship

Based on the works of Robert Kegan (1994) and Marcia Baxter Magolda (2001, 2008, 2014), self-authorship describes a three-step continuum in which students develop their inner voice by creating meaning from their concrete experiences. Myers (2020) notes that self-authorship provides an appropriate context for students to examine and synthesize the learning outcomes from their experiences in service-learning courses. Individuals first frame their models of thinking from external voices

and rely on educators or other adults to inform them what to think (Barber & King, 2014; Baxter Magolda, 2008; Baxter Magolda & King, 2012). Individuals then move into the 'crossroads' phase, where their externally defined views are at odds where the formation of their preconceived values. Finally, individuals move into the final phase of self-authorship where they determine their own personal beliefs, thus contextualizing their person within a larger social and world scope (Coughlin, 2015). Baxter Magolda & King (2008) thus note becoming self-authored means the individual has learned to "negotiate and act on [their] own purposes, values, feelings, and meanings rather than those [they] have uncritically assimilated from others" (Mezirow, 2000, p. 8).

Reflective Journaling

Students must individually reflect to synthesize conclusions from their service-learning and educational experiences (Baxter Magolda & King, 2008; Jenkins & Sheehey, 2011; Moely & Illustre, 2014). Ash et al. (2005) concur and specifically note that critical, guided reflection offers ample opportunity for students to further their learning. However, many students are not taught how to critically reflect even though it is necessary for solidifying higher levels of learning (Ash et al., 2005; Dyment & O'Connell, 2011). Reflective journal prompts may offer a potential solution for addressing students' lack of ability to critically reflect, and therefore, ability to become self-authored. Kolb's (1984) model of experiential learning proposes reflection as a critical step to bettering future learning experiences. Baxter Magolda and King (2008) further suggest educators offer questions that prompt students to look beyond the face-value of the experience and explore extraneous connections. Boud et al. (1985) proposed a model of reflection that follows a similar structure to that of Kolb (1984). Learners should first describe the experience and their corresponding observations before examining and considering their associated emotions. Johns (1995) later added a fourth stage, learning, which asks students to reflect on their feelings toward and learning outcomes of the experience. Finally, to encourage students to champion and strengthen their internal voice, educators should decrease the level of given structure for progressive journal prompts (Dyment & O'Connell, 2011). The beginning prompt should explicitly probe students for their observations while the last should offer little to no structure. This gradual decrease allows students to take a more active part in their learning; these learners may show to be furthered developed in their self-authorship journey.

Purpose of Study

Developmentally effective experiences such as service-learning courses often elicit personal development in students (Barber et al., 2013; Barber & King, 2014; Kegan, 1994; King et al., 2009). While different opportunities may give way to different developments, learners commonly establish stronger values and beliefs, increase their social and worldview awareness, develop an internal identity, and engage in learning beyond the classroom (King et al. 2009; Moely & Illustre, 2014; Yoon et al., 2011). Essentially, they start to become self-authored. Therefore, this study seeks to assess the impact of an education-based service-learning experience on undergraduates' self-authorship process at a 4-year university. The following research questions guided the study:

RQ1: To what degree does implementing the Boud et al. (1985) model of reflection as a framework for undergraduate student journaling throughout a 16-week service-learning course at a 4-year public university elicit development of the student self-authorship process, if at all?

RQ2: What participant variables indicate the greatest likelihood of self-authorship growth (i.e. do college seniors have stronger development of inner voice vs. college freshmen)?

RQ3: Is it a combination of service-learning activities and participant variables that elicit self-authorship growth (i.e. the right person and the right experience elicits growth)?

Definitions

Drawing on the works of Robert Kegan and Marcia Baxter Magolda, this study defines self-authorship and inner voice respectively as "an ideology, an internal personal identity, a personal authority" (Kegan, 1994) in which individuals rely on their "meaning-making capacity from…inside the self" (Baxter Magolda, 2008). Additionally, several researchers suggest individuals often experience self-authorship as a result of critical reflection in conjunction with service-learning (SL) and/or developmentally effective experiences (DEEs), where critical reflection is the act of moving beyond describing an experience to evaluating the meaningfulness of an experience (Ash et al., 2005; Felten & Clayton, 2011), SL is applied curricular learning with corresponding structured reflection (Bringle et al., 2006; Bringle & Hatcher, 2009), and DEEs are experiences that progress an individual's self-authorship (King et al., 2009).

Study Design

The following research study is qualitative in nature and is modeled after Hensler (2017), which utilized a phenomenological approach to describe community college students' development of self-authorship as a result of participating in an international service-learning trip. Researchers assume that modeling this design with a public university's service-learning course focused on a local, community setting may prove useful in similarly determining participants' degree of self-authorship.

Before conducting the study, researchers completed the Collaborative Institutional Training Initiative program (CITI) in order to engage in study with human subjects and received permission from the university's Institutional Review Board.

Researchers conducted this study with an undergraduate service-learning course at a public four-year university for which they are the corresponding professor and graduate teaching assistant. The course focuses on partnering students in science-related majors with local elementary and middle school teachers to help teach science. Students may enroll in the course to fulfill the university's experiential learning course requirement.

In total, 60 students are enrolled in the course; students may choose to attend in-person, online synchronously, or asynchronously. For students attending asynchronously, all lessons are recorded live and can be accessed on the university's online learning platform. Researchers recruited study participants during one class

session for which the lesson was recorded and posted online. Three email reminders were also sent: one immediately following class instruction; a reminder email sent five days after initial introduction; and a final, individualized email. Of the total class, 21 students signed the consent form (see Appendix A) and agreed to participate in the research study; eight were randomly selected for data collection and asked to confirm participation. Chosen participants information will be assigned pseudonyms; all information will be kept confidential. There are no risks to participating in this study and choosing to participate or not participate will neither benefit nor harm a student's academic performance in the course.

Data Collection

Students enrolled in the course are required to submit weekly journals entries that encourage reflection of the experience. Comparable to Hensler (2017), researchers utilized Seidman's (1991) three-interview model to formulate the journals for data collection. Six journal topics were selected for data collection and prompts accordingly probed students for details on their life history (journals one and two), thoughts on the service-learning experience (journals six and seven), and overall reflection of the experience (journals eleven and twelve) (Seidman, 1991). Within this framework, researchers utilized a model of reflection developed by Boud et al. (1985), later addended by Johns (1995), to further write journal prompts aimed at engaging students in critical reflection of their experiences. As such, the prompts asked students to look back on their experiences and provide any information about feelings, evaluations, or learning that occurred during or as a result of the experience (Boud et al. 1985; Johns, 1995). Journal prompts became increasingly less structured over the course of the class to further examine whether students developed a sense of self-authorship and inner voice without external suggestion from researchers (Boud, 2001; Dyment & O'Connell, 2011). Table 1 illustrates overall structure of the frameworks used in journal entry construction as well as corresponding prompts used in data collection. Table 2 provides a complete list of journal entry assignments.

Table 1.
Development of journal entries based on Seidman (1991), Boud et. al (1985), Johns (1995), and Dyment & O'Connell (2011)

Three-Interview Model	Model of Reflection	Journal Prompts	Level of Structure
Seidman (1991)	Boud et al. (1985), Johns (1995)		Dyment and O'Connell (2011)
Interview 1: Life History		**1**—This entry will focus on self-reflection, *it is not a biography*. Describe yourself a little bit: Where are you from, and where did you grow up? How old are you? What is your current college status? (Freshman, Sophomore, etc.) Describe your path to [UNIVERSITY] – why did you decide to attend? (1) What is your major, interests, or career goals? What are some of your hobbies? (2) What two virtues are most important to you and why? How do you feel you exhibit these in yourself? (3) Describe an experience in your life that challenged you. How did you react, and what did you learn from it? **2**—This entry will focus on what education and service-learning mean to you. Describe your educational background. How important was education to you and your family growing up? Give some examples that reflect how important it was. Describe your favorite and least favorite educational experiences (could be a day or a whole year) and describe why. What made you want to do Project FOCUS? What were your initial thoughts on service-learning? What does service-learning mean to you? Have you participated in a service-learning project/course/activity before? How do you think this experience will benefit you? Establish and elaborate on two or three goals you aim to accomplish during this semester.	Most structured
Interview 2: Details on the Experience	1. Return to the Experience 2. Attend to feelings 3. Re-evaluate the experience 4. Learning	**6**—Describe your experience in the classroom this week. What happened? What did you do? What did the students do? Did your teacher ask you to help teach at all? What were positive aspects of your experience? Negative aspects? How did these make you feel? Considering both the positive and negative aspects of this week's classroom experience, what will you do the same next week? What will you do different? Was there anything you felt you could have dealt with better? Why or why not? What did you learn from this experience? **7**—What significant learning events happened in your classroom this week? What caused them to happen? How do you help support your teacher during the lessons? How is your presence benefiting the learning environment? What are some difficulties in the process of schooling? You may focus on: How the students responded to your hands-on activity; How the children interacted with you, the teacher, and each other; The students' attitudes toward the experiment or activity; How the teacher felt about and reacted to the activity; Anything you have gained from the experience.	Less structure
Interview 3: Reflection on the Experience		**11**—Who are you going to be as a teacher? Whatever your profession, we are all teachers to some degree. Reflect on what you learned in this course about yourself and teaching and how will you integrate that into who you are going to be in the future. **12**—Reflect on your entire service-learning experience this semester. This should be 3-4 pages (double-spaced) in length.	Least structured

Table 2.

Complete List of Course Journal Entry Assignments

JOURNAL NUMBER AND TITLE	PROMPT
1 **Who are You**	This entry will focus on self-reflection, *it is not a biography*. Describe yourself a little bit: Where are you from, and where did you grow up? How old are you? What is your current college status? (Freshman, Sophomore, etc.) Describe your path to [University] – why did you decide to attend? (1) What is your major, interests, or career goals? What are some of your hobbies? (2) What two virtues are most important to you and why? How do you feel you exhibit these in yourself? (3) Describe an experience in your life that challenged you. How did you react, and what did you learn from it?
2 **Education and Service-Learning**	This entry will focus on what education and service-learning mean to you. Describe your educational background. How important was education to you and your family growing up? Give some examples that reflect how important it was. Describe your favorite and least favorite educational experiences (could be a day or a whole year) and describe why. What made you want to do Project FOCUS? What were your initial thoughts on service-learning? What does service-learning mean to you? Have you participated in a service-learning project/course/activity before? How do you think this experience will benefit you? Establish and elaborate on two or three goals you aim to accomplish during this semester.
3 **Role Models and Mentors**	Think about a teacher who inspired you. Were they a 'good' teacher? What age were you when you had this teacher? Why did they inspire you, and what did they do that made them good? That is to say, what qualities did this teacher have that you appreciated? Do you think all 'good' teachers share these qualities? Has this teacher shaped your career path in any way? How? Is there anything else about this teacher that stands out to you?
4 **SKIP**	No entry was provided this week.
5 **Online versus In-Person Learning Environments**	As you start signing up for classrooms and getting to know your students, think about your last journal entry. Many of you discussed how 'good' teachers are those who provide compassion and a listening ear, and also have a passion or interest for their subject. Now think about the difference between your K-12 experience and that of today's students. In what ways do you personally feel the impacts of COVID-19 and distance learning? How does it impact your learning? Do you prefer in-person or online learning environments? Why? What struggles or challenges do you think your students will face/are facing? Imagine you are 10 years old - could you attend school online? What aspects of these good teachers are needed for different age levels (for example, what do you think a 10-year-old attending school online needs in a good teacher vs what a 20-year-old needs in a good teacher)? How do you intend to be a good teacher for these students, regardless of the setting?
6 **Initial Thoughts**	Describe your experience in the classroom this week. What happened? What did you do? What did the students do? Did your teacher ask you to help teach at all? What were positive aspects of your experience? Negative aspects? How did these make you feel? Considering both the positive and negative aspects of this week's classroom experience, what will you do the same next week? What will you do different? Was there anything you felt you could have dealt with better? Why or why not? What did you learn from this experience? **If you have been unable to make contact and volunteer with a teacher by the time this journal is due, please email Dr. Peake and Jade and we will provide you with an alternative prompt.

7
Acclimating to the Teaching Environment
	What significant learning events happened in your classroom this week? What caused them to happen? How do you help support your teacher during the lessons? How is your presence benefiting the learning environment? What are some difficulties in the process of schooling?
	You may focus on:
	   ○ How the students responded to your hands-on activity
	   ○ How the children interacted with you, the teacher, and each other
	   ○ The students' attitudes toward the experiment or activity
	   ○ How the teacher felt about and reacted to the activity
	   ○ Anything you have gained from the experience.	

8 **Levels of Learners**	Choose one student who is an English language learner, gifted, or receiving special education services. Describe how that student interacts and learns in the classroom, but focus on practical, tangible steps you could take to reach that student more. How do both your teacher and you work with or accommodate this student? Does this student belong in your classroom? If so, why? If not, what type of class would be a better fit and why?	
9 **Is teaching a profession?**	Law, medicine, and a few other fields are considered *professions*. There is a debate in education about whether or not teaching is a profession. For this journal, you will weigh in on the debate. View certification requirements at http://www.gapsc.com/ProspectiveEducator/routesToInitialCertification.aspx. Use your experiences teaching and observing your teacher as well as the requirements for getting a teaching certificate to support your argument for or against teaching as a profession.	
10 **Teaching Styles**	At this point, you have been working with your teacher for a while. Compare and contrast your teaching style with your classroom teacher's teaching style. Discuss strengths and weaknesses for both you and your teacher. How do both you and your teacher seek to improve?	
11 **As a Teacher, I will…**	Who are you going to be as a teacher? Whatever your profession, we are all teachers to some degree. Reflect on what you learned in this course about yourself and teaching and how will you integrate that into who you are going to be in the future.	
12 **Reflecting on the Semester**	Reflect on your entire service-learning experience this semester. This should be 3-4 pages (double-spaced) in length.	

Data Analysis

Researchers utilized a content analysis approach to independently analyze participant journal entries for themes and codes related to the development of self-authorship. Researchers compared themes and codes and used respondent validation to verify their findings. Each participant was asked the same initial questions while remaining questions were tailored to the unique themes and codes identified from each individual's journal entries. These interviews were recorded, transcribed, and analyzed to verify themes and codes from participants' corresponding journal entries. Participant interviews were assigned a corresponding pseudonym and their information will be kept confidential.

According to King et al. (2009), the following themes related to self-authorship often emerge from developmentally effective experiences: increased exposure and recognition of diversity and viewpoints; better defined inner belief and values system; developed sense of identify; and increased responsibility and internal motivation to

learn. As such, this study ultimately looks to see if similar themes emerge from participants journal entries and interviews.

Limitations

Given the on-going coronavirus pandemic of 2019 – 2020, students attended classes in numerous formats. No student chose to attend class in person, so this limited our ability to recruit participants to the study as we were unable to directly speak with them. Students that did choose to provide consent for participation were mostly science majors who self-selected the course, often as a part of the university's experiential learning course requirement, so the study results cannot be generalized to every student at the university given differences in age, major, background, etc. Furthermore, this study did not have an age limit; thus, study participants may already be differing levels of self-authorship given their educational and personal backgrounds. Correspondingly, researchers could not control for participants current level of self-authorship.

Results

Eight students were randomly selected and consented to participate in this research study. Table 3 illustrates assigned pseudonyms and related participant contextual variables.

Table 3.
Key for participant numbers and corresponding, assigned pseudonyms

Number	Assigned Pseudonym	Age	Year	Major	Minor
1	Rosemary	20	Sophomore	Biological Sciences, Psychology	Biology
2	Summer	21	Senior	Biology, Psychology	N/A
3	Kale	22	Senior	Biological Sciences	N/A
4	Marigold	22	Senior	Biological Sciences	N/A
5	Ginger	21	Senior	Biology	N/A
6	Sage	21	Senior	Psychology	Human Services
7	Basil	21	Junior	Psychology	Sociology
8	Sky	18	Senior	English	Political Science

Researchers utilized respondent validation to confirm themes, which included: participant background information, education, service-learning, experiences in service-learning, reflections in service-learning, self-authorship, and virtues/values. These seven themes fit with the model of reflection (Boud et al., 1985; Johns, 1995) used by researchers to write the journal prompts. As such, background, education, and service-learning fit under Stage 1, experiences in service-learning and reflections in service-learning fit under Stage 2 and Stage 3, respectively; and self-authorship and values/virtues fit under Stage 4.

Research Question One

Research question 1 sought to examine the degree to which journal prompt following the model of reflection (Boud et al., 1985; Johns, 1995) elicited the development of self-authorship in a service-learning course. From this objective, three themes emerged.

Service-learning

Service-learning experiences, when combined with critical reflection, allow students to construct meaning from their experiences and develop a sense of inner voice (Ash et al., 2005; Bringle & Hatcher, 2009). King et al. (2009) defined these as "developmentally effective experiences," or experiences that promote an individual's authorship. Participants were asked in journal 2 to describe their initial thoughts on and reflections about service-learning in general as well as this course more specifically. Table 4 illustrates themes the resulting themes.

Table 4.

Service-learning

Subtheme	Quotations from Participants
Interest in service-learning activities	*6, Sage* – "I think service-learning is a wonderful experience that applies real-world application to daily understandings."
Personal definition of service-learning	*1, Rosemary* – "To me, service-learning means being a leader in your community and helping those who may not have the same experiences that I did."
Why I chose Project FOCUS	*4, Marigold* – "My initial thoughts on service-learning are that you can either 'walk the walk or talk the talk,' but what happens when you 'walk the talk?'" *3, Kale* – "I wanted to join this class to gain more volunteer experience and to help make a difference in the [city] community." *4, Marigold* – "I signed up for Project FOCUS to provide a meaningful component to my last year in [city], because when I am stressed, it helps me to spread as much love and support to ground myself with what is important." *6, Sage* – "I chose Project FOCUS because I wasn't really sure what it was about, but it was suggested by my advisor who knows me fairly well." *8, Sky* – "I know this should probably be some colorful reason as to why I chose this class, but honestly, I needed my requirement met for service-learning and I've always loved teaching (just in a higher level), so I just picked the first class that came up."
Goals for the semester	*2, Summer* – "I also wish to identify and focus more attention on students who have fallen behind on work this last year." *7, Basil* – "I also want to be understanding towards students who may not be able to complete assignments on time or focus on the assignment completely if it is being done during the session – [COVID-19] has proven to be much harder on that of children whose social situation has been limited to just those in their immediate family, so the need for understanding about behavioral issues is very apparent."
Feelings about the semester	*1, Rosemary* – "Before coming back to [school] in January, I was sitting in my living room with my mom going over the syllabus for Project FOCUS. I was very overwhelmed and did not know what to expect at all from this class, being that I had no teaching experience." *6, Sage* – "I think that I will benefit greatly from this experience because it will show me a real-world application and representation of what occurs outside of my college education bubble, while simultaneously feeling rewarded for helping children in their pursuit towards their own education." *7, Basil* – "When enrolling in this course, I found myself very doubtful of what I could add to an elementary school classroom; I did not have much confidence in myself when considering how I could help a STEM teacher with activities as science has never been a course that I have enjoyed or excelled in."

Self-Authorship

Well-designed service-learning experiences, with corresponding reflective activities, contribute to students' personal growth, often manifested as self-authorship (Felten & Clayton, 2011). As such, asking students to reflectively write about their experiences allows them to make connections from the classroom to their life (Baxter Magolda & King, 2008). Table 5 illustrates these connections made by the participants for their lives and work beyond the classroom.

Table 5.

Self-Authorship

Subtheme	Quotations from Participants
Using inner voice to apply class experience to outside world	**2, Summer** – "In the future, I plan on applying what I understand about guiding students through lessons to epidemiology. Just like students, the general public contains many different people, so it is important to direct information rather than just provide information and hope for the best."
	4, Marigold – "Overall, I learned that I have a sincere passion for serving children and that I am entering the correct profession. I am excited to serve as a pediatrician after the conclusion of this pandemic."
	5, Ginger – "This class has helped me be more patient and understanding when teaching. I think it will help me when I am coaching, working with patients, or hopefully one day when I have children of my own."
	7, Basil – "Not only did I find this classroom to be an insight to what that particular setting is like in an elementary school, but I also allowed myself to utilize this experience to see what I could hone in one in my own life in order to better prepare myself for how to care for patients in the future."

Values and Virtues

Journal 1 asked students which values or virtues they viewed to be most important. Subsequent prompts again addressed the manifestation of these values, because these core beliefs contribute to the development and confidence can contribute to inner voice (Baxter Magolda, 2008; Baxter Magolda & King, 2008; Kegan, 1994). Table 6 illustrates values and virtues participants identified as most important to them.

Table 6.

Values and Virtues

Subtheme	Quotations from Participants
Honesty and truthfulness	*1, Rosemary* – "It is crucial to be honest because it allows one to live a free life where he or she can be real with themselves and others." *4, Marigold –* "I think that it is so important to share how you really feel about something instead of remaining quiet in a conversation or one worse: sharing the opinion that is common across the group setting."
Compassion, empathy, and listening	*7, Basil* – "I believe I am compassionate to a fault…I felt compassion towards all of the children, most specifically those that were seeming to have a hard time. I feel as though this will be used in my future endeavors of medical practices in my relations to patients."
Creativity	*2, Summer* – "I think promoting creativity is extremely important and that is why I am a successful science student. I try to exhibit creativity wherever I can, and I try to promote it. It teaches you how to solve problems and encourages independence."
Patience	*2, Summer* – "The patience I learned [from dealing with illness] can now be adapted for use in many other situations."
Respect, justice	*4, Marigold –* "we need to respect differing opinions and thoughts, because we all have different backgrounds, traditions, and experiences." *6, Sage* – "Justice is important to me because I think all people should be moral about their choices and to know when they did wrong and apologize."
Dependability, loyalty, responsibility, and trustworthiness	*3, Kale –* "Dependability is important to me and I always try to live by it by always keeping my word and to do what I say I will." *8, Sky* – "[T]he most important virtues to me are trust and loyalty. In a world run by social media and people being able to say whatever they want behind the comfort of a screen, it is really hard to trust people and their intentions. I just want to be surrounded by people who won't do things behind my back or do things to hurt me intentionally."
Kindness	*5, Ginger* – "It is very important to me to accept everyone and to spread kindness."
Generosity and magnanimity	*7, Basil* – "I am generous and magnanimous with those I care most about."

Research Question Two

Research question 2 sought to identify participant variables that indicate the greatest likelihood of self-authorship growth. From this objective, two themes emerged.

Background

Individuals develop meaning-making structures over time as a result of their life experiences (King et al., 2009), all of which contributes to the development of inner voice and self-authorship (Kegan, 1994; Baxter Magolda, 2008). Journal 1 asked participants to describe and reflect on their life experiences thus far. Most indicated they were from [State], some from rural areas, others from a large metropolitan area; two were not from [State]. Some indicated they had not yet experienced any significant life challenges. These individuals summarized their experiences but offered little reflection on how this changed their outlook of life. Those who did describe life challenges discussed the importance of religion in overcoming their challenges or resulting change in career path. Table 7 highlights quotations from participants about their background.

Table 7.

Background

Subtheme	Quotations from Participants
About me	**2, Summer** – "For most of my life, I have lived in Peachtree City, [State], most commonly referred to as the "bubble" or the land of golfcarts. Locals call it the "bubble" because the community is highly homogenous."
	4, Marigold – "My hometown is Euharlee, [State], which yes is in the middle of nowhere."
	6, Sage – "I grew up in Northeast Philadelphia until I was 17, then I moved to Lansdale, Pennsylvania which is a suburb outside of the city."
	7, Basil – "I am from Brentwood, Tennessee. I have always lived in Brentwood, which is a smaller suburb of Nashville, and both of my parents grew up there as well."
Life challenges	**1, Rosemary** – "One of the biggest challenges in my life was withdrawing from Organic Chemistry in Fall 2020. I have always been a straight A student, so failing at a class was not something that I was used to."
	3, Kale – "I have been fortunate enough to not have any serious challenging experiences, however, recently my biggest challenge was preparing for the DAT (dental admission test). I did poorly the first time taking the exam, and realized I was lying to myself about how hard I was preparing. The next I took it I prepared much harder and received a much better score."
	4, Marigold – "…the [State] Tech Admissions committee did not read my essay of know why I wanted to be a Yellow Jacket, but instead, they knew that I was not capable of their instruction. Were they correct? Absolutely not."
	7, Basil – "An experience in my life that most challenged me occurred my freshman year of college when my mother had brain surgery to remove an acoustic neuroma on my 19th birthday…I did not get to be with her in that initial experience, so I had to result in returning home on the Friday that followed. In this experience, I was taught that most situations are out of your control and that you must learn to deal with experiences as they come – you cannot plan for the future entirely."
Life aspirations	**3, Kale** – "I am planning on going to dental school after graduation."
	7, Basil – "This situation also led me to find my calling in college; I initially was accepted as a pre-law student, but after experiencing the fast-paced life of a medical professional while I stayed in the hospital with her that weekend, I found that my calling was elsewhere."
	8, Sky – "I am currently a senior at [University] graduating in December 2021 I am majoring in English and a minoring in Political Science with intentions to go to law school after graduating."
Religion, faith	**1, Rosemary** – "As a result of withdrawing, I decided to audit the course to continue learning the material to be better prepared to take it the following semester. I learned to lean on God and trust him through everything. During this challenging time, my relationship with God grew immensely, and I feel like a new person."
	4, Marigold – "To be honest with you, the University of [State] was not my plan, but it was God's plan. I thought I was going to be a [State] Tech Yellow Jacket, and wow, I was wrong."

Education

Pizzolato (2008) discusses the importance of students connecting career choice and educational experiences with their past, present, and future selves. Students who engage in self-authorship are more likely to choose majors aligned with their interest. All of the participants noted the importance of education to them, usually as a result of their parents' viewpoints. Most discussed their favorite and least favorite educational experiences, and how these experiences shaped their desire to pursue certain college or career goals. Others chose certain majors or colleges to experience a different environment. Table 8 illustrates information about the participants' educational backgrounds.

Table 8.

Education

Subtheme	Quotations from Participants
Importance of education to me	*1, Rosemary* – "Education is very important in my family. My great-grandfather, grandfather, and mother have all served as superintendent of their school systems. I was always encouraged and pushed to work hard to ensure that I succeeded in school." *5, Ginger* – "Education is the key to the future. Since I was a little kid, my parents have instilled in me the importance of education."
Past experiences in education	*4, Marigold* – "My favorite educational experiences were in my Advanced Placement (AP) classes with [teacher], because she taught me to self-care, study, and prepare for college. *5, Ginger* – "One of my least favorite experiences happened when I was in fourth grade. My teacher had favorites and I was not one of them." *6, Sage* – "I loved to learn about local history of the Native Americans in fourth grade, and I loved when we discussed grammar and poetry because I found that I excelled in the subject matter."
Past challenges in my education	*3, Kale* – "My least favorite educational experience was easily the semester I took organic chemistry II. It is by far the most challenged I've ever been academically." *6, Sage* – "My least favorite educational experience was in sophomore year of high school trying to learn geometry. As a perfectionist, it absolutely broke my heart to hear my teacher say that 'most of you will only get C's in the class.'"
Path to college (major, etc.)	*1, Rosemary* – "From a young age, I knew I wanted to attend college here because I wanted to be a veterinarian, and I heard fantastic things about [University]'s Vet School." *2, Summer* – "I decided to go to [University] because it was the simplest option for me. It is certainly not the most compelling or entertaining university acceptance story, but at the time, I needed to make a decision that I would not regret later on…I always knew that I wanted to go into the field of science because it is the only major or area of study that is real to me. Everything else is created by humans, but science is observing and understanding something that was already here." *6, Sage* – "I stumbled on [University] by accident; I wanted to go far away from home for college because I felt very restricted in my town. I was tired of being around the same people, culture, and expectations." *7, Basil* – "I was compelled to apply to the University of [State] because I had only applied to small, liberal arts colleges and wanted to include at least one larger school in the mix."
Work and learning style	*2, Summer* – "Even though I am a science major, I draw, paint, sew, do woodwork, etc. I think promoting creativity is extremely important and that is why I am a successful science student." *5, Ginger* – "One of my favorite educational experience was in high school, I went on a fieldtrip to the Bodies Museum in Atlanta. I enjoyed this experience because I was learning in real life and I am a visual learner."

Research Question Three

Research question 3 sought to consider whether a combination of service-learning activities and participant variables elicited self-authorship growth. From this objective, two themes emerged.

Experiences in Service-learning

Baxter Magolda and King (2004) proposed the Learning Partnerships Model (LPM) as a method for encouraging and helping students develop their sense of authorship. Specifically, the LPM encourages educators to validate students' knowledge and experiences and aid them in constructing meaning from these experiences (Baxter Magolda, 2014; Coughlin, 2015; Pizzolato, 2008). The participants described positive and negative experiences both within and outside of the university setting. From these experiences, three subthemes emerged, as illustrated by Table 9.

Table 9.
Experiences in Service-learning

Subtheme	Quotations from Participants
The [University] classroom as a variable	**1, Rosemary** – "The journals ended up being one of my favorite aspects of the class because it allowed me to see how I was growing as a person and impacting the lives of my students."
	5, Ginger – "The lecture part of this class was key part of success in the classroom at the elementary school. Although the lecture was over zoom and at times hard to connect with my fellow classmates due to them having their screens off or not showing up at all our professor did a good job trying to engage the students."
	8, Sky – "I know that I have stressed this immensely throughout this journal, but Project FOCUS genuinely left me shell shocked. I was just trying to get my service-learning class to graduate next semester and instead I ended up in a class and experience that I would not have traded for anything."
Individual experiences as a variable	**1, Rosemary** – "There was one major aspect that was negative. During one of the origami frog classes, a student became overwhelmed and said that she "couldn't do it." The student's mother was sitting next to her and said a curse word while the student was unmuted to ask a question."
	2, Summer – "Throughout this semester, I have learned more about each student's circumstances, and I have started to enforce consequences for certain students when they forget their supplies."
	3, Kale – "By the end of the semester, I was rocking out workbook pages with my online students with ease, and they had all collectively learned a lot in math from the day I started helping them."
Classroom teacher as a variable	**4, Marigold** – "[My teacher] is a wonderful teacher because she is a strong servant leader. Her servant leadership is such an inspiration to me, and I am grateful for her passion for education."
	5, Ginger – "My teacher wears many hats and is more than a person that just stands up at the front and teaches. She is a mother figure, a caregiver, a listener, and so much more. Mrs. Parr is empathic and a very kind soul."
	7, Basil – "Throughout this entire process, Mr. Stanton's activities have changed my perspective on what science can be to a child – my elementary school did not offer a STEM course, only core curriculum-based science where we were tested yearly on our achievements. The idea that this course is solely for the purpose of making children explore their creativity in different outlets is something that was very foreign to me but an aspect of school that I wish I had the chance to experience."

Reflections in Service-learning

Beyond the experience itself, educators should encourage and assist students in making their own meaning from their experiences by guiding them through reflection, thereby encouraging a shift from external to internal voice (Baxter Magolda & King, 2008; Pizzolato, 2008). This reflective process encourages students to confront conflicting ideas and emotions to further help them shape their view of the world. Table 10 illustrates the resulting subthemes.

Table 10.
Reflections in Service-learning

Subtheme	Quotations from Participants
Emotions experienced during service-learning	*1, Rosemary –* "One of my favorite aspects of this class is seeing my students succeed. It fills me with such a sense of satisfaction and happiness."
	3, Kale – "It was a really good learning experience for me to see how teachers, especially of young students, get through their day-to-day helping these students learn and grow, and I was very thankful for [my teacher] letting me help her class these past few months."
	6, Sage – "A positive aspect of my experience was being able to interact with the kids. It is very empowering to help them achieve things and I get so excited when I ask them questions and they are eager to reply."
	7, Basil – "I truly enjoyed this course in its entirety, no matter how long it took me to find my teacher and how difficult a particular day seems to be; I always returned home, refreshed and energized, due to the feeling of accomplishment I received from the children and experience in the classroom."
Lessons learned from service-learning	*2, Summer –* "Many people lose their creativity as they age, so I think we should care more about creativity. It teaches you how to solve problems and encourages independence."
	4, Marigold – "To summarize what I have learned through my participation in Project FOCUS, I can explain it in three components: patience, communication, and time management."
	8, Sky – "I have learned that sometimes things don't go as plan and that you need to be able to adapt on your feet to make the best experience possible. When you adapt to the day and the moods that everyone is in during the day, you allow everyone to be at their peak performance even if it wasn't the original plan."
What it means to be a teacher	*1, Rosemary –* "As a teacher, I will be a mentor to my students. I have always relied on those older than me to help me through life and give me guidance."
	4, Marigold – "As a teacher, I aspire to be encouraging and listening twice as loud as I speak, because these students need positive attention and hope for their future."
	5, Ginger – "As a teacher, I will be a positive light for students to look to for inspiration. I will be an out of the box teacher, who will explain something five different ways in order for a student to understand it."

Conclusions

This research study overarchingly sought to determine whether service-learning courses, particularly the course taught by the researchers, guided students toward recognizing and developing their inner voice.

Themes determined from participants' journal entries indicate service-learning experiences, when combined with opportunity for critical reflection, do elicit a development in inner voice, or at the very least, engage students in recognizing their internal dialogues. Several participants noted the benefit of classroom activities – discussion with other classmates, instructor or teacher support, and reflective journal entry assignments – in helping them make meaning of their experiences. Others drew on their past experiences and challenges to shape how they acted and thought as a teacher for the students they were helping. Many participants noted they found it impactful or disheartening to learn about their students' backgrounds; this conflict often served as an opportunity for the participants to re-consider their view of the world, at least from an educational sphere. Despite the focus of the course, and the fact that many enrolled to fulfill the university's experiential learning course requirement, participants overall appeared to develop a stronger inner voice.

Research Question 1

Data from journal entries revealed themes regarding participants' initial thoughts of service-learning, level of self-authorship, and strongly held values and virtues. The former theme effectively acted as a litmus test, and revealed participants generally felt positive about engaging in service-learning. Participants indicated these experiences tested their ability to be authentic leaders who live by strong values. Almost all touched on the real-world applications of the lessons they learned from their actual experience. These themes, particularly the latter two, reflect development in the participants' meaning-making structures; participants described that these lessons helped them rethink their career choices or outlook on real-world problems. Thought these journals purposefully guided participants through their experiences, researchers concluded, to some degree, this course did enable students to become more self-authored as they all emerged with a better understanding of the purpose of service-learning for their lives beyond the educational setting.

Research Question 2

Participants provided details regarding their age, upbringing, and educational background. Those that discussed their past challenges, especially challenges they classified as significant, appeared to be further along the continuum of developing their sense of internal voice. Essentially, they had a more well-formed meaning-making structure for internalizing both personal and worldly events.

Participants who described more significant challenges also wrote about the importance of empathy and compassion for students facing similar challenges. These participants seemed easier able to voice from their internal perspective why they were empathetic for the students they were helping. In other words, participants used their internal voice to yet again draw connections between their past experiences and values to provide comfort and make meaning of other's hardships.

In contrast, most participants were relatively externally defined regarding the importance of education. Most had parents who continually emphasized the importance of school, so almost all participants expressed a similar viewpoint.

Research Question 3

Researchers further sought to determine whether either the service-learning experience or the reflections had from the experience elicited self-authorship, or whether it was the combination of both the experience and the reflections had that caused self-authorship. Generally, when prompted, students provided detailed accounts of their experiences; researchers also guided participants by providing prompts that asked participants to consider their feelings and learning, too. Researchers found this did increase students' engagement in considering their inner voice. However, whether the researchers as course instructors or the reflective abilities of the participants themselves had a greater impact is uncertain. Nonetheless, journal prompts 11 and 12 were considerably less structured than journal prompts 1 and 2, yet, participants actively reflected on and described the applications of their service-learning experiences.

Future Research

Future studies should consider examining the effect of critical reflection in other service-learning course disciplines, as well as more time and experience-intensive settings. For example, career-focused internships may be one setting where the development of self-authorship may be even more apparent, especially if students self-select for interest and intended career path. Future studies may also consider examining the impact of critical reflection on eliciting self-authorship where there is no university requirement for experiential learning courses. Such a study may benefit from more of intrinsically motivated attitude rather than an extrinsically motivated attitude.

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The Impact of an Online Service-Learning Framework on Students' Understanding of the Complexity of Community Food Security and Development of Professional Skills

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ABSTRACT

The purpose of this study was to evaluate student learnings from an online community food security service-learning course in which students self-selected a community partner for an in-person service experience. Four major themes emerged from the data: (1) "food insecurity doesn't have a single face," (2) understanding of the complexities and nuances of food insecurity, (3) use of emotion to describe and discuss the service component of the service-learning experience, and (4) expression of appreciation and respect for organizations working to address food insecurity. The findings of this study support a scalable framework for online service-learning courses where students self-select their community partners.

Service-learning is an educational pedagogy that integrates course material, related service in the community, and guided critical reflection about the experience (Ash et al., 2009; Eyler et al., 1996; Eyler & Giles, 1999). This pedagogy is known to increase students' self-efficacy (Cooke et al., 2015; Overton, 2015; Sanders et al., 2016) and develop strong "campus-community ties" (Aftandilian & Dart, 2013). Self-efficacy is one's confidence in their ability to execute a task or skill (Bandura, 1977) and is an important aspect of skill development. Service-learning has the potential to benefit the student, community partner, and individuals the community partner serves (Lear & Abbott, 2009), and mutually beneficial partnerships are an essential component of service-learning courses (Bringle & Hatcher, 1996; Furco, 2000; Tinkler et al., 2014). Service-learning courses can be delivered in a traditional face-to-face setting, online, or with a hybrid approach where some content is delivered online and some face-to-face.

Within the last 10 years, service-learning has transitioned into the online learning environment (McGorry, 2012), and with this transition arose a new classification of service-learning referred to as "eService-learning" (Malvey et al., 2006). The term "eService-learning" encompasses any service-learning experience that contains an online component

(Waldner et al., 2012). eService-learning can increase student confidence and self-efficacy (Early & Lasker, 2018; Gasper-Hulvat, 2018; Schwehm et al., 2017); build a stronger understanding of their discipline (Becnel & Moeller, 2017); foster professional skills (also known as "soft" or "transferrable" skills), including empathy (Faulconer, 2020; Gasper-Hulvat, 2018), critical thinking (Faulconer, 2020), and listening skills (Gasper-Hulvat, 2018; Sun & Yang, 2015); and enhance student civic responsibility and social consciousness (Bourelle, 2014; Early & Lasker, 2018; Marcus et al., 2019; Schwehm et al., 2017).

Service-Learning Spectrum

The delivery method of the service-learning experience can be described as a spectrum, with one end of the spectrum having both academic instruction and service fully in-person and the other end of the spectrum having both academic instruction and service fully online (Waldner et al., 2010). Between the two extremes of the spectrum are variants with some degree of online service and/or academic instruction (Waldner, et al., 2010). Types of eService-learning include Type I (online learning with in-person service); Type II (in-person learning with online service); Type III (a portion of the learning online and in-person and a portion of the service online and in-person, which some term "blended"); and Type IV (with fully online service and learning) (Faulconer, 2020; Waldner et al., 2012).

Community Partner Identification

How community partners are identified for the service component of a service-learning course varies, depending on the course. In some courses, the instructor identifies one community partner with which all students will engage (Bourelle, 2014). In others, several community partners are identified by the instructor, and the instructor and/or student determines with which community partner the student will work (Nielsen, 2016). Student-initiated community partnerships, where students identify a community partner and initiate communications with that partner, can help students develop problem solving skills and the ability to adapt to challenges and changes during the experience (Nielsen, 2016).

In addition to skill-specific benefits, allowing students to select their community partner relieves course instructors of the responsibility of identifying a community partner (Nielsen, 2016). Additionally, requiring students to identify a community partner for the service component of the service-learning course allows the student to identify a more accessible (Nielsen, 2016; Roman, 2015) and/or more relatable community partner, resulting in a more meaningful service-learning experience (Nielsen, 2016). Student community partner selection can also allow students to explore a specific interest further by selecting a community partner whose work aligns with this interest (Nielsen, 2016). Further, this allows for students to select a community partner whose service requirement fits within their schedule (Roman, 2015). Ultimately, it also allows the university to "expand its reach" to the communities in which the online students live (Helms et al., 2015).

Despite these benefits, there are potential barriers and limitations to community partner self-selection. Student selection may result in a community partner agreeing to a service partnership they are unprepared to fill, resulting in lack of communication and information dissemination for the student to successfully complete their work (Nielsen,

2016). Student self-selection of community partners may also result in unequal service experiences for students due to differences in responsibilities assigned by the community partner (Helms et al., 2015; Roman, 2015).

Critical Reflection

Critical reflection is the key component that connects the academic material to service in a service-learning course (Ash & Clayton, 2004; Ash et al., 2009; Eyler et al., 1996). Critical reflection encourages students to consider what they have learned through their service experience and how it applies to their classroom learnings (Ash et al., 2009; Karasik, 2013). Critical reflection allows for deeper exploration of the experience and associated learnings when compared to a standard reflection process (Ash & Clayton, 2004) and allows students to evaluate their prior beliefs and preconceived notions (Toronyi, 2020). Forms of reflection previously implemented in service-learning courses include journaling, in-class reflection activities or discussions, student presentations, online discussion forums, projects, and reflection papers (Brand et al., 2019; Dinour et al., 2018; Karasik, 2013; Mitchell et al., 2015; Sanders et al., 2016; Schneider-Cline, 2018; Tinkler et al., 2019). These reflections can occur at the end of the experience or throughout the experience (Faulconer, 2020).

Reflection papers are intended for students to critically reflect as they articulate what they have learned through their experiences (Dinour et al., 2018). Prior work indicates that critical reflection papers can deepen student learnings (Ash et al., 2005) and increase critical thinking (Allison, 2008) in a service-learning course. In the past, reflection papers have been used to measure changes in self-efficacy due to a service-learning experience, with results indicating that service-learning increases self-efficacy (Goodell et al., 2016a; Sanders et al., 2016; Schneider-Cline, 2018). Prior analysis of student reflection papers from service-learning courses and community engagement activities indicated students' ability to connect with course themes (Trudeau & Kruse, 2014), change their assumptions, apply skills in the community, and improve their understanding of the community students served (Dinour et al., 2018; Sanders et al., 2016).

Critical reflection papers are a way for students to articulate and document specific learnings (Ash & Clayton, 2004). When appropriately guided using specific, measurable learning objectives, critical reflection papers can offer an authentic depiction of student learnings (Ash & Clayton, 2004). As a result, critical reflection papers may be an effective mode by which to assess student learnings from an online service-learning course.

Community Food Security

Community food security can be defined as "a situation in which all community residents obtain a safe, culturally acceptable, nutritionally adequate diet through a sustainable food system that maximizes community self-reliance and social justice" (Hamm & Bellows, 2003). Food insecurity impacts aspects of individual well-being, including health, confidence, productivity, and ability to care for others (Maroto et al., 2015). Households with the highest rates of food insecurity include "households with incomes below 185 percent of the poverty threshold," "households with children headed by a single woman," "households with Black, non-Hispanic heads of household," and children where the head of house is not single (Coleman-Jensen et al., 2019).

In the past, service-learning has been integrated into courses that aim to educate students on and address food insecurity (Aftandilian & Dart, 2013; Currey et al., 2018; Grossman et al., 2012). Students who complete such a course have a greater understanding of community food security (Aftandilian & Dart, 2013; Currey et al., 2018; Grossman et al., 2012) and can see how course topics, such as food injustice (Aftandilian & Dart, 2013), characteristics of food insecure households (Aftandilian & Dart, 2013; Currey et al., 2018), and the impact of food insecurity (Aftandilian & Dart, 2013; Currey et al., 2018) manifest in the community. Students have been able to help address community food security through the service component of service-learning courses (Aftandilian & Dart, 2013; Grossman et al., 2012; Porter et al., 2008). Service activities include helping community members apply for food stamps, community garden development and maintenance, and providing garden education at community gardens (Aftandilian & Dart, 2013; Grossman et al., 2012; Porter et al., 2008). Ultimately, service-learning courses strengthen the mutually beneficial relationship between the university and the surrounding community (Aftandilian & Dart, 2013). Service-learning experiences have also been shown to shift student beliefs, when structured appropriately, and allow students to recognize themselves as "change agents" (Toronyi, 2020).

Despite these findings, there are still limited service-learning studies related to the effect of student self-selection of a community partner on student learnings and course experience. There is also a lack of work focused on self-selection of a community partner in, specifically, online service-learning courses and how that selection impacts student outcomes. Further, to our knowledge, student learnings from an interdisciplinary service-learning course focused on community food security have not been evaluated. The goal of this study is to explore student learnings from an online community food security service-learning course through thematic analysis of critical reflection papers.

Methods

Course Design

Introduction to Community Food Security is a Type I eService-learning course taught during a five-week summer session. Students complete all academic course work online, including units on the basics of community food security, multidisciplinary approaches to community food security programming, and case studies of successful local, state, and national community food security organizations. Students explore food insecurity through the lens of the social ecological framework. Some course learning objectives include (1) describe the history of food inequalities in the United States from a racial and social class perspective and the role of food justice in empowering these historically disadvantaged groups, (2) explain the complexities of community food security using the social ecological model as a framework to understand the interconnection of causes of food insecurity understanding the role of race and socioeconomic status on food security, and (3) discuss the limitations of and challenges faced when implementing community food security programs using one discipline's approach when compared to another discipline's approach. To receive the service-learning designation from the authors' university, the course must have service-learning-specific learning objectives and meet a minimum number of service-learning

hours per credit hour. The learning objectives for this course that align with the service-learning experience include (1) discuss the strengths and limitations of a community partner's current approaches to achieving community food security and ending individual food insecurity, (2) identify and describe current limitations to achieving food security efforts within the given community, and (3) describe how academic learning about community food security gained through the course was either reinforced or challenged as a result of the service-learning experience.

Throughout the summer session, students complete 15 hours of service at a community food security-oriented organization. Students self-select the community partner with whom they complete the service component of the course. The course instructor provides the students with a list of requirements for community partners and tips for identifying potential community partners. Because students are taking the course online, community partners are not limited to the community surrounding the university, but rather, are in the communities in which the students reside during the summer term. Students complete a series of assignments related to the service-learning experience, including (1) an assignment where they identify and rank their preference for three potential community partners in their community, (2) a survey agreement with the one community partner agency where they will complete 15 hours of service, (3) a report summarizing an interview with a staff member at the community partner agency, (4) small group discussion board posts where students compare and contrast community partner characteristics based on interview reports, (5) a proposal for ways that the community partner agency might adapt their programming, (6) small group discussion board posts where students provide feedback on the feasibility of their peers' proposals, (7) a final, adapted proposal incorporating peer feedback, (8) a survey verifying the completion of the 15 service-learning hours, and (9) a critical reflection paper summarizing their learnings from the entire experience. Interview and proposal assignments are common "deliverables," and group discussion boards and post-experience reflection papers are common forms of reflection within eService-Learning courses (Faulconer, 2020).

Study Design

Students enrolled in the online service-learning course wrote critical reflection papers as part of normal educational practices after completing the service-learning experience. Researchers analyzed 60 critical reflection papers, written by students enrolled in the course during the summers of 2017, 2018, and 2019. This research was approved by the Institutional Review Board at the authors' university.

Before engaging in thematic data analysis, researchers completed a five-phase coder training for data analysis, including completion of ethics training, review of relevant research methodology, discussion of codebook and its use, group coding of a subset of the data, and individual coding of the data set followed by discussion to reach consensus (Goodell et al., 2016b). Researchers engaged in a bracketing activity to document and discuss beliefs and assumptions related to community food security and service-learning (Beech, 1999; Creswell & Miller, 2000). This bracketing exercise helped to ensure that the findings of the study are representative of the data and not the researchers' preconceived beliefs or assumptions.

The research team chose a thematic analysis approach to qualitative analysis because this methodology allows for evaluation of data in a flexible manner to gain new knowledge (Braun & Clarke, 2006). The research team consisted of two graduate students and two faculty members. The two graduate student members of the research team completed open coding to determine emerging concepts and inform the development of the codebook. The same team members then independently coded the critical reflection papers using the codebook, meeting weekly to come to consensus on codes. Throughout data analysis, the research team met weekly to discuss coding discrepancies and determine preliminary dominant emergent themes. After the researchers coded all critical reflection papers, two members of the team reviewed quotes by coding category; then the entire research team determined the final dominant emergent themes.

Results

Thematic analysis of student critical reflection papers resulted in four dominant emergent themes: (1) "food insecurity doesn't have a single face," (2) understanding of the complexities and nuances of food insecurity, (3) use of emotion to describe and discuss the service component of the service-learning experience, and (4) expression of appreciation and respect for organizations working to address food insecurity.

Theme #1: "Food insecurity doesn't have a single face"

Students were able to identify that food insecurity can affect anyone. Contrary to their prior assumptions, they concluded that there is no prescribed description or external appearance to visually indicate that an individual is food insecure. As a result, students identified that there is no single face of food insecurity. For example, one student described an experience with a fellow volunteer:

I talked to one individual who was volunteering with me who told me about how he used to be food insecure. ... [H]earing this story really helped me see that a lot of these people are on their way to make their life better slowly, but food insecurity makes it difficult to focus on the other things in your life that can help you. The story and the experience really solidified the idea that food insecurity has no face[--] it can be anyone [--] and that nobody at all deserves to not know where their next meal comes from.

Another student shared:

Relating back to those I would see walking in and using [the organization]'s services, I was a little surprised by some of the people walking in; case in point[,] the first time I walked in to [the organization] for the interview segment of this project[,] I started talking to a woman who was dressed in business casual with an [redact] ID around her neck who turned out to have not had any part of [the organization] and was truly just there to get what she needed to get.

This student's surprise at the appearance of the individual receiving aid is consistent with comments made by other students. Another student commented on the appearance of those receiving food aid by writing,

> ...I had a picture in my head of what kind of individuals I would see at the pantry[,] and I did see plenty of people that fit that description[,] but I also saw several families that did not look like your typical family who is considered food insecure. This volunteer experience opened my eyes to the fact that at any given time it could be me and my family that has to walk through the front doors of [the organization] and take a number.

Many students assumed they would be able to determine whether someone was food secure based on their external appearance. The following student noted the disparity in anticipated versus actual external appearance by noting:

> As awful as it sounds, I assumed that I would be able to distinguish who was food insecure and who was not by their appearance. We often associate the poor and homeless to look dirty, have torn or ripped clothes, and have bad hygiene. I thought that when people arrived at [the organization] I would be able to distinguish who was coming to receive assistance and who was coming to shop, but I was quickly proven wrong. Almost everyone [who] came to the daily food basket program was nicely dressed and groomed. Their clothes were clean and so was their hair, face, and outer body. There were many people wearing designer clothes and sneakers but were still in need of food assistance.

Another student described a similar experience:

> ...I saw several people that I knew very well and would have never thought were having trouble with food security were some of the clients at [the organization]. I happened to know one of the families very well and I had no idea that they did not have enough food for their family. [It] was an eye-opening experience for me because the clients of a food pantry come in all shapes and sizes. The typical person you would think of as needing to go to a food pantry was definitely there as a client but there were also families that I knew that had jobs and worked very hard and still visited the food pantry because their jobs were not paying enough to make ends meet for their family.

Another student described how their community partner helped them understand that "food insecurity doesn't have a single face." This student reflected:

> The volunteer coordinator for [the organization], [name], informed on how diverse of a people group they serve based on both race, socioeconomic standing, and culture. She alluded to something we discussed throughout the course, hunger does not have a look and it's not an exclusive club for a certain type of person.

A small but notable group of students expressed further understanding by describing how individuals with a fixed income or low-income job struggle to pay bills and purchase food. As one student noted,

The people may have jobs who pay minimum wage or higher[;] however[,] their paychecks go towards rent, electric bills, phones, etc. After these expenses are paid off, they may not have enough left to be able to feed themselves or their families.

Similarly, a student shared:

After meeting some of the individuals who were receiving food from the food pantry, I realized that many of them were normal working people having a hard time paying for food on top of the normal everyday household and living expenses.

Another student explained:

What I didn't realize that this course and volunteering showed me was that people become food insecure all of the time, and that [it] occurs in so many different ways. At the food bank the director was giving some examples of this, like how for instance if someone had just lost their job and hadn't been able to save up for an emergency, or how there is a huge portion of seniors who are food insecure and are incredibly resistant to ask for help.

Through the online academic material, students learned about the groups experiencing the highest rates of food insecurity, and as indicated by their critical reflection papers, they were clearly able to understand that food insecurity can affect all people regardless of race, age, perceived level of wealth, or employment status. As a result of this understanding, students concluded that "*you really can't judge people based on their exterior appearance.*"

Students were able to recognize that certain groups are more affected by food insecurity than others, connecting this finding back to their academic learning. These learnings align with the course objectives. As one student mentioned:

My service experience genuinely reinforced a few of the concepts I learned in this class when it comes to the individuals who are affected by food insecurity. When visiting local pantries on deliveries[,] I quickly saw the disproportionate amount of African American and Latino families who sometimes needed help from their local pantry.

This understanding was further depicted by their use of statistics provided by the organization or concluded from their observation to highlight the prevalence of food insecurity experienced by certain groups. When describing their experience, one student referenced these statistics:

According to my observation, there were approximately 60 percent of people who get the food are Latinos, 30 percent of people are African American, and 10 percent of people are Caucasians. This distribution ratio is very similar to what we learned from the relationship between community food security and race.

Through student descriptions and statistics, students identified African Americans, Latinos, individuals of low socioeconomic status, and elderly individuals as being more vulnerable to food insecurity. Reflecting on their experience, one student noted:

100% of the people who were volunteering for their meal were black. 100% of the people who were volunteering and not receiving a meal were white. While these statistics aren't representative of all of [large city in state], it does strongly reinforce that blacks struggle with food insecurity more than whites.

These findings are consistent with the course objectives, indicating that student experiences aligned with their academic learnings.

Theme #2: Understanding of the complexities and nuances of food insecurity

In addition to understanding and articulating the individuals affected by food insecurity, students were also able to express their understanding of the complexity of food insecurity. Through their reflections, students demonstrated that they can understand the complex nature of food insecurity, expressing an understanding of the dichotomous nature of food insecurity and that food insecurity can be both dynamic and perpetual. Students demonstrated an understanding that lack of transportation, healthcare expenses, and lack of access to healthy foods are barriers to food security. One student reflected on lack of transportation: *"There still exists a need to distribute services for clients who are unable to reach the facility. Establishing a volunteer base willing to deliver groceries to client[s'] homes could impact more members living in food deserts."* Another student described the impact of healthcare expenses on food insecurity by writing:

Stereotypical food insecurity could be due to a loss of a job or falling below the poverty line, but I never thought of food insecurity as regarding those who are falling short of funds due to an unexpected medical emergency or other-like emergency. The folks that take advantage of this food pantry most likely do not fit the stereotypical mold of food insecurity.

Further, when prompted to discuss the role of socioeconomic status and race on food insecurity, students recognized the systemic underpinnings and their consequences, which perpetuate food insecurity. Students identified historical oppression, structural racism, and stratification of social classes as root causes. As one student stated,

African American and Hispanic individuals are more likely to live in poverty than Caucasian Americans, thus contributing to lower socioeconomic class statuses of African American and Hispanic households. Lower social class status pairs with food insecurity as nutrition needs are unable to be met under conditions of poverty.

A small but strong contingency of students articulated food deserts, lack of education, Jim Crow laws, and community-wide food insecurity as byproducts of the root causes of food insecurities. One student noted: "*In the United States, African Americans are more*

than twice as likely to face hunger than are Caucasians—not everyone has been given equal opportunity to access food due to discriminatory Jim Crow laws, slavery, and even housing location placement." Students appeared to apply their understanding of the complexity of food insecurity to the service-learning experience, viewing food insecurity through the lens of the social ecological model.

While students understood that there is not a singular solution for food insecurity, they did not articulate solutions to systemic causes of food insecurity that would address it in a long-term and sustainable manner.

Theme #3: Use of emotion to describe and discuss the service component of the service-learning experience

Through their critical reflection papers, students expressed different emotions that they felt throughout the service component of the service-learning experience. Students expressed an immense amount of surprise and shock. Many students expressed surprise and shock at the state and magnitude of food insecurity in the community they served. The following quote illustrates a student's surprise and shock:

Since this was my first experience working at the [clothes pantry,] I did not know what to expect as far as the amount of people that would show up. I was shocked at how many people were there when the doors opened to get some items they needed.

Another student reflected similarly:

I grew up around a more rural type of poverty, so it was hard for me to wrap my head around the extent and magnification of Urban poverty in this area. The sheer size of [the organization] was shocking to me because up until then, all I knew about food security was the statistics[,] and I had not given much thought to what it truly takes to reach people in need.

Students also expressed frustration and sadness regarding the extent of food insecurity in the community and that they were unable to provide a more immediate form of long-term relief. Through their reflection, one student commented:

...when I helped the truck driver deliver food to the different places, there were a lot of people waiting for the food. This made me feel frustrated because there are many things that are wrong in our society, and these people often work really hard to have a better life but cannot seem to escape the cycle of poverty.

Similarly, another student reflected:

When visiting local pantries on deliveries[,] I quickly saw the disproportionate amount of African American and Latino families who sometimes needed help from their local pantry. While this was something I expected and something [the volunteer coordinator] and I discussed in our interview, it was startling nonetheless[,] especially when you see that they are all working very hard to put food on the table.

A small but marked group of students expressed surprise at the impact they were able to make in providing food insecurity aid during their service-learning experience. For example, one student reflected on their impact:

> *...another expectation I had was that in a 2 or 3 hour session, we would not be able to actually make a difference or contribute a significant amount to the community. However, I was pleasantly surprised when I found that at the end of [our] session we had [processed] thousands of pounds of food goods!*

The majority of students expressed positive emotions related to the service component of their service-learning experience. One student shared:

> *I also interacted with many other individual volunteers who all had varying reasons as to why they were spending their time at [the organization]. It was enjoyable to work with so many different people and engage in thoughtful conversations often about life and food security.*

A subset of students described their experience as humbling. For example:

> *It was very humbling to see all types of individuals volunteering at the Food [B]ank through the course of my 15 hours and to reaffirm that every little bit of time you put in through volunteering makes such a huge difference.*

A small group of students described that at the beginning of the service-learning experience they had negative emotions such as nervousness or disappointment in anticipation of working with a certain population or community partner. One student mentioned that they were "...*not overly excited to be placed with seniors for the Cooking Matters course that I was assigned to*" at the start of the service-learning experience. This indicates that while students were able to pick their community partner, they were not always able to pick the activities they would engage in with that community partner. Despite their initial expression of negative emotions in anticipation of the service component of the course, all of these students expressed positive emotions when reflecting on their experience, indicating that their emotions changed over the course of the experience. One student reflected:

> *Never in my life have I seen myself enjoying farm work. … Driving up for the first time I was nervous and apprehensive, but it didn't take long for me to fall in love with the work I got to do there.*

Theme #4: Expression of appreciation and respect for organizations working to address food insecurity

In addition to describing the service-learning experience with positive emotions, students also expressed appreciation and respect for their community partners. One student articulated a sentiment shared by many of the students, writing: "*After my service experience, I have to admit that I have gained a newfound respect for organizations that are attempting to promote community food security. It is a tough process with a great number of barriers.*" Similarly, another student reflected:

After witnessing these collaborations, I gained a new respect for the scale of the community food security efforts. There is more work that goes into these efforts than I originally thought. The amount of planning and research that has to be done to effectively tackle the problem is incredible.

While this appreciation and respect was a general sentiment, students also specified which organizational components they admired most. Many students conveyed appreciation and respect for the values or mission of the organization. For example: "*...I liked that [the organization] had this sort of no religious strings attached feeling. [The organization], by having no religious affiliation, seemed more welcoming towards all food insecure individuals, rather than focusing on a religious context to help the hungry.*"

A small number of students also expressed appreciation and respect for specific actions taken by the organization as a part of their food insecurity efforts. One student described the efforts of the organization they served:

...It really demonstrated how important it was to the organization to do more than just provide food to the community. It brought the meaning to a deeper level because they put themselves in their shoes to understand the culture of the area and start growing foods that the community enjoyed eating. They even took it a step further to teach basic recipes to the community, which blew me away because they took the time to gather the exact ingredients for the recipes and made take home cards on how to prepare the meal. By seeing this[,] it made me appreciate the work they were doing here so much more and reaching beyond just feeding the community, but teaching the families valuable skills that they can pass down to their children.

Several students articulated respect for the scale and tasks required to allow the organization to function. One student reflected that they "*[had been] able to experience many examples of what it is [like] to actually work to make an effort in changing our community's food insecurity. [The organization] was so incredibly welcoming and encouraging to all of their volunteers.*" Students often used the term "eye-opening" when elaborating on their observations of the service organization's operations, such as: "*The service-learning experience I participated in this course was so unique and honestly, such an eye-opening and positive learning experience.*"

Additionally, students expressed appreciation and respect for the workers and volunteers at the organizations they served. One student reflected:

Without [the kitchen manager], the meals would never be cooked and prepared for the food insecure families. [The farm manager] and [the kitchen manager] work side-by-side, coordinating daily, to link arms and pursue their common goal. I really enjoyed watching two very different people, with different backgrounds, experiences, and disciplines, work together so well and in unity.

While expressing this appreciation and respect, students commented on the passion, character, and efforts of specific individuals with whom they interacted. One student reflected on her encounter with individuals from the organization by writing,

> *The staff are all passionate about what they do[,] and they are so inspiring to listen to when they talk about what they do. I'd also add that the Board of [D]irectors is a solid and active team[;] they not only have their regular jobs, but make it a point to volunteer and be patrons of [the organization] as well. The volunteers are incredible as well[;] they come from all walks of life and various parts of the United States.*

Discussion

The findings of this study indicate that (1) a Type I eService-learning course using student community partner self-selection can help students see the complexity of course content in a community-based setting and (2) this framework can be effective and scalable for instructors seeking to build students' professional and transferrable skills and civic-mindedness.

Prior research shows in-person service-learning courses allow students to understand food insecurity and connect course objectives to the service component of the course (Aftandilian & Dart, 2013; Currey et al., 2018; Grossman et al., 2012). The present study demonstrated that delivering a course on community food security using this online service-learning model allows students to understand the complex nature of food insecurity. This course is an interdisciplinary course open to students of all majors; the findings of this study revealed that by using an online service-learning framework, students from various disciplines are able to understand the complexity of community food security. Findings indicated that students are able to articulate root causes of food insecurity, systemic underpinnings of food insecurity, manifestations of those systemic underpinnings, and further, that food insecurity can affect anyone, hence demonstrating understanding of course learning objectives. This study also demonstrated that online service-learning courses in which students self-select their community partners can be a positive experience for students. This is consistent with prior work indicating that allowing students to select the community partner for the service component of the service-learning course allows the student to select a partner with values, goals, and/or objectives that align with the students' (Nielsen, 2016). The result of student community partner selection is a more meaningful experience (Nielsen, 2016).

Additionally, our findings are consistent with prior research indicating that the use of a service-learning model allows students to meet the intended course objectives (Bettencourt, 2015). When prompted to reflect on course learning objectives, students were able to articulate the role of race and social class on food security and articulate barriers to achieving food security. Further, students were able to describe how these course objectives manifested in their service-learning experience. As evidenced by students fulfilling course learning objectives and articulating how these tenets could be seen in the community, service-learning can facilitate the application of academic learnings in a community-based setting.

Through participating in this online service-learning course, students developed an appreciation and respect for the community partner and community. This aligns with

prior work indicating that medical students appreciate community exposure from participating in service-learning as a component of their curriculum (Essa-Hadad et al., 2015). Student appreciation and respect may stem from students self-selecting their community partner. This may result in a preexisting investment in the organization that is further emphasized through the service-learning experience. Moreover, student appreciation and respect could merely originate from the experience itself through interacting with the organization and the populations it serves. This experience allows students to be involved with vulnerable populations and establishes a deeper connection (Essa-Hadad et al., 2015). Some students expressed the desire to continue to serve their community following the conclusion of the course, which highlights the appreciation for the connections made. Of those with interest in continued service, a small portion desired to continue to address food insecurity. This may, in part, be due to their appreciation for the community partner and their efforts to ameliorate food insecurity after witnessing it first-hand.

The findings from the evaluation of this Type I e-Service-learning course also indicated that in addition to serving as an effective avenue for students to understand the complexity of an issue, the course also helps improve students' professional skills and civic-mindedness. Students developed professional skills such as empathy, understanding, and communication skills that are transferable to other environments. This is evidenced by their expression of emotion and appreciation and respect for community partners and is consistent with prior work indicating that eService-learning can facilitate development of empathy (Faulconer, 2020; Gasper-Hulvat, 2018; Marcus et al., 2019) and listening skills (Gasper-Hulvat, 2018; Sun & Yang, 2015). Student investigation of community partners and subsequent selection may also contribute to the development of professional skills and civic mindedness. Given the demonstration of these professional skills in the community, this framework can create more civic-minded students who, upon successful completion of the course and conferring of their degrees, will matriculate into various industries. This study adds to the existing body of literature indicating that eService-learning can allow students to engage in "transferable skills refinement" (Faulconer, 2020) and create more civically responsible and socially consciousness individuals (Bourelle, 2014; Early & Lasker, 2018; Marcus et al., 2019; Schwehm et al., 2017).

Overall, the findings support that this particular service-learning framework helps students become more well-rounded. This proves to be advantageous when looking for jobs upon graduation. In 2020, the Association of Public and Land-grant Universities (APLU) identified 11 gaps in employability skills, including "build[ing] professional relationships," "identify[ing] and analyz[ing] problems," and "communicat[ing] accurately and concisely" (Crawford & Fink, 2020). A service-learning experience can also be an experience that students may choose to highlight on a resume (Helms et al., 2015). Using the framework where students self-select a community partner may help students build professional relationships, potentially more so than if told by the instructor with whom they will be working for the semester. As evidenced by students' ability to understand the complexity of community food security, an online service-learning course may also help students see this complexity in action in the community and improve their ability to identify and analyze problems. Finally, requiring students to communicate with the community partner to establish the semester contract and having

students reflect on their experience through critical reflection papers may help students build more effective communication skills.

This framework used in this Type I eService-learning course provides an example for facilitating student community partner identification for an online service-learning course. Instructors seeking to apply a similar framework for helping students understand the complexity of topics within their own disciplines may consider the key components of this approach:

Community Partner Identification Assignment: In one of the first assignments of the semester, students identified three possible community partners and ranked their preference for partnership. This process may have resulted in students spending a greater amount of time considering with which community partner they planned to work, increasing their investment in the service component of the course. The student self-selection model likely allowed the student to select a community partner whose goals and values aligned with their own. The student demonstration of appreciation and respect may also have been a result of this prior investment in community partner identification. This assignment also helped to establish communication between the student and instructor and allowed the instructor to ensure the student was selecting a community partner that meets the requirements of the service component of the service-learning course.

Critical Reflection: Critical reflection is essential for helping students articulate their course learnings. Facilitating critical reflection through a final response paper can allow the student to reflect on the service as a whole to understand their course learnings within the context of their service. Providing prompts for the student to reflect on can encourage students to reflect on specific course objectives, thus encouraging further learning. While this paper focused on the outcomes of the post-experience critical reflection paper, students also completed a series of other service-learning assignments, including group discussion board posts, which helped them compare and contrast their service-learning experience with their peers' experiences.

This study extends prior findings related to online service-learning courses and demonstrates the impact of implementing an online service-learning course. Using this framework, the student is responsible for identifying the community partner agency where they will complete the service component of the course. In using this model, the course instructor allocates the task of identifying and vetting community partners to the students (Nielsen, 2016). Establishing and maintaining service-learning partnerships can be time-consuming, and relying solely on the instructor for this work may limit partnerships to the network of the instructor. However, involving students in community partner identification allows for expanding the reach of the university's community engagement (Faulconer, 2020). The effectiveness of this approach for community partner identification is evidenced by these students' ability to identify community partners in their own communities, under the direction of the course instructor. Further, given the success of this model, the present framework is scalable and, therefore, can be used with larger class sizes. This is advantageous because service-learning is classified as a high-impact experience (Kuh, 2008), and many universities seek to increase student participation in high-impact practices. Given that service-learning is

lacking in STEM disciplines (Faulconer, 2020), this framework may offer a more realistic way to help increase service-learning in STEM courses, while reducing the time investment for the instructor. Using this framework, more students can be exposed to service-learning and reap the benefits of a high-impact experience. Additionally, this approach may make it easier to increase the class size in a service-learning experience; increasing the class size allows for more community partnerships and more service in the community.

Limitations and Future Directions

It is important to acknowledge that students submitted critical reflection papers and received a grade. Therefore, in some cases, students may have included information in their papers that they believed the instructor wanted to hear, with the hope that those "correct answers" would earn them a higher grade. To limit this effect, instructors crafted the critical reflection questions to encourage students to think critically and offer multiple perspectives about the experience – not just the most rewarding experiences. However, if a student did write what they thought the instructor wanted to hear, the research team would not have been able to separate those types of responses from genuine learning and reflection.

It is also worth noting that the method of academic material delivery and development of course learning objectives likely has an impact on the degree to which the course objectives are met. As a result, replication of the course design may yield different results on student learnings and overall experience from the service-learning course. Additionally, given that students self-selected their community partner in the context of an online service-learning course, these findings may not be applicable to in-person service-learning courses or service-learning courses in which the instructor selects the community partner for the student.

Student self-selection of the community partner for the service component of the service-learning experience lends itself to a more meaningful experience. Future studies could explore if a more meaningful service-learning experience impacts long-term retention of academic material and sustained community involvement. Additionally, future studies could investigate whether student engagement in service-learning experiences creates a competitive advantage for students as they seek employment post-graduation.

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Teacher Education Candidates Providing Educational Technology Professional Development to the University Community through Service-learning

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Service-learning is a versatile and diverse activity used in a broad range of educational settings, where educators aim for students to have meaningful and confrontational learning experiences (Carrington & Saggers, 2008). To simplify, service-learning entails the connection of theoretical knowledge gained in the classroom with practical experience gained in the community and has particular resonance in subjects where academics seek to expand and transform their students' understanding of diversity within their communities (Mergler & Carrington, 2018). The Department of Teacher Education and Nicholls State University utilizes service-learning in a variety of courses to ensure student career preparation.

Educational Technology has been available to K-12 and higher education educators since the 1990s. During the COVID-19 pandemic, educators around the world had to operate remotely and thus K-12 and higher education institutions had to adapt to remote instruction through the use of various technologies. Additionally, due to The Coronavirus Aid, Relief, and Economic Security (CARES) Act funding students had access to devices through 1:1 initiatives (Department of Education, n.d.).

As vaccines were developed and social distancing protocols enacted, higher education intuitions began to adapt to lower COVID-19 infection rates by providing hybrid and face-to-face instruction. However, both students and instructors had become acclimated with access to devices and using educational technology in

ABSTRACT

Technology use in education has grown at a rapid pace throughout the last decade. However, the COVID-19 pandemic created a lasting impact on technology use for instruction in pre-kindergarten through twelfth grade (PK-12) classrooms and college courses. This creates an even greater need for preservice teachers to be provided with opportunities to develop knowledge and skills related to technology integration. This study explored the impacts of an educational technology service-learning opportunity on undergraduate preservice teacher candidates as well as university instructors. Undergraduate teacher candidate participants completed a course assignment in which they researched and presented various educational technology tools. University professor participants attended these presentations and completed a brief survey on the experience. Through the study, the researchers determined the impacts on each group and implications for further study and development of resources related to the use of educational technology in college courses and preservice teacher candidate preparation.

their courses. Additionally, faculty have indicated in numerous surveys both the researchers' institution and others a need for training in the area of educational technology (Arya et. al, 2022). Many faculty have indicated that due to institutional requirements to provide instruction, service, and research, they have little time for exploring various types of technology they can incorporate into their courses.

Upon the completion of a teacher preparation program, candidates are expected to possess the knowledge, skills, and dispositions of an effective classroom teacher. This includes knowledge and skills related to the use of technology for all aspects of teaching including but not limited to: lesson planning, instruction, assessment, parent communication, and more. Teacher preparation programs are expected to provide opportunities for teacher candidates to effectively integrate technology into lessons in a meaningful and effective way. To help preservice teacher candidates prepare for the use of technology in the classroom they are required to take an introductory course focused on educational technology. This course is at the beginning of the curriculum so that candidates can develop these skills and apply them throughout their teacher preparation program. The course not only provides the opportunity to expose candidates to the vast number of educational technologies but also how to effectively integrate technology into all aspects of teaching to have positive impacts on student learning.

This study was designed to identify if a preservice education technology assignment could be utilized as a service-learning opportunity to provide professional development to higher education instructors. Specifically, the following objectives were met:

1. Utilize a capstone preservice teacher education assignment as a service-learning opportunity.
2. Identify if the service-learning opportunity influenced college instructor choice/use of educational technology.
3. Examine if the service-learning opportunity influenced preservice teacher preparation for future presentations and lesson implementation.

Service-Learning in Education

In higher education, service-learning has increasingly gained an appreciation for its use as a pedagogical tool for student development (Mason & Dunens, 2019). This increased interest is supported by various external entities that claim the value of service-learning in post-secondary education (Bringle & Hatcher, 1996). Notable supporters include entities such as the American Association of Colleges and Universities (AAC&U) which cites service-learning as a catalyst for improved student engagement and insight (AAC&U, 2007) as well as the Interstate Teacher Assessment and Support Consortium (InTASC) whose standards require teacher candidates to use service-learning to develop and apply a deeper understanding of content areas in meaningful ways (InTASC, 2013). Along with interest from national entities, significant research has been conducted on the effects of implementing service-learning in a variety of settings. Service-learning benefits are cited as ranging from short-term academic achievements to broader areas such as improved civic and social

engagement (Clever & Miller, 2019). Research also provides evidence that service-learning positively affects "personal, attitudinal, moral, social, and cognitive outcomes" (Bringe & Hatcher, 1996, p. 223).

As supported by associations such as AAC&U, service-learning opportunities are often embedded throughout institutions of higher education. Educator preparation providers are no exception. Research specific to departments of teacher education has found that service-learning opportunities have the potential to enhance preservice teacher interest, provide more meaningful and collaborative experiences, improve teaching performance, and build lifelong skills (Bringle & Hatcher, 1996; Carrington, & Saggers, 2008; Dean & Wright, 2017). Furthermore, service-learning has been used as a pedagogical tool for preservice teachers to gain a greater understanding of diverse populations and deepen their knowledge of specific content areas (Clever & Miller, 2019; InTASC, 2013). This impact can empower future teachers through active and more meaningful participation in course-embedded opportunities (Niemi, 2002).

Technology Integration

Educator preparation programs are facing various new challenges. The Covid-19 pandemic in conjunction with the continuously changing landscape of academia has presented barriers in education that have never been seen before (Kasraie & Kasraei, 2010; Rapnta et al., 2021). With these new challenges have come advancements in technology that have the potential to empower pedagogy in the field of education (Kasraie & Kasraei, 2010). Technologically enhanced teacher tools have found their place in education and are creating innovative ways to motivate students and revitalize the classroom (Delgado-Almonte et al., 2010). With advancements, however, comes the responsibility of efficient and effective use. During the pandemic, many educators were required to transition to emergency remote teaching without training or support (Rapnta et al., 2021). Rapnta et al. (2021) called this experience the "unplanned and forced version" of teaching with technology (p. 715). While difficult, this changing landscape has provided an opportunity for preservice teachers to become leaders in best practices and in leveraging educational technology to improve student learning (ISTE, 2021; Rapnta et al., 2021). The International Society for Technology in Education (ISTE) provides standards as a foundation for technology innovation related to learning, teaching, and leading (ISTE, 2021). While these standards are all-encompassing including a framework for students, educators, education leaders, and coaches; they specifically cite educators continually improving their practice, exploring proven and promising technological practices, and advocating for access to educational technologies to meet the diverse needs of all students (ISTE, 2021, p. 5). There is a current and increasing need to invest in technological teaching tools and pedagogy to aid educators in reaching all students in an ever-changing academic environment (Evans, 2021; Kasraie & Kasraei, 2010; Rapnta et al., 2021). As Evans (2021) stated, "If you're going to invest in technology, invest in the training, support, monitoring, and maintenance to make it work" (p. 1). Educator preparation programs have the chance to train preservice teachers to be leaders in these initiatives, but candidates must be technically and socially prepared to succeed in their journeys as educators (Hankey, et al., 2017, p. 97).

Professional Development for Educational Technologies

With the need to improve the investment in technology-enhanced teaching tools comes the need for increased professional development to support these processes. The effects of a global pandemic further emphasized the need for professional development and support of teachers effectively using technology (Onyema et al., 2020). This is evident in the educator preparation programs that integrated technology into their frameworks prior to the pandemic showing a significant advantage over programs that did not (Onyema et al., 2020). The programs that support educational technologies have provided evidence of improved "teachers' beliefs about teaching and comfort with using technology" and of students in these classrooms "benefiting from the added technology resources" (Blanchard, et al., 2016, p. 216). It is vital for institutions to understand that engagement with and proper use of educational technologies requires an ongoing commitment. Despite the increased reliance on these technologies, many preservice and current teachers are still not supported and are not ready to effectively integrate technology into their practices (Blanchard, et al., 2016; Onyema, et al., 2020; Petegem, et al., 2021). A key factor in professional development related to technology is how aware educators must be of the unrelenting need for continuous knowledge and understanding of the increasingly digital educational environment (Strydom, 2021). "Embracing the digital world and growing as a digital scholar requires us to embrace the notion of continuous professional development." (Strydom, 2021, p. 156). This means that not only is professional development for educational technologies necessary, but that continuous engagement may be just as important.

Course Assignment

The assignment required preservice education candidates to develop a presentation on a variety of specific educational technology tools. The summative assessment meets the main learning objectives for the course, introduction to technology integration for teachers. This assignment also meets national and departmental standards in which candidates are required to utilize a variety of instructional strategies to provide equitable and inclusive learning experiences.

Candidates become experts on the individual technology tools that they present but are also asked to review peer's presentations to learn about the other tools popular in K-12 education. This ensures that candidates build a knowledge base of various technology tools that can be used in K-12 classrooms. Additionally, the assignment requires them to research and discuss specific ways the tool can be used in K-12 lessons which contribute to their ability to import internet-based artifacts into lessons they will develop in the future as they progress through the program.

Each candidate was assigned a technology tool designed for or used in the field of education. Candidates were required to research, explore, and test the tool they were assigned and were instructed to become 'experts' on their assigned tool. After an exploration phase, candidates designed a presentation to showcase their assigned tool. Presentations were to include an introduction, links to appropriate websites, embedded tutorials, and other related information. Candidates were also required to discuss how the tool could be used in K-12 and higher education classrooms including specific examples of how the tool could be used in each setting. If applicable, candidates were

also asked to develop example activities or prepare to demonstrate the tool in use during their presentation. To prepare for the presentation day, candidates were instructed to develop talking points to showcase their tool and how it can be used within 2 - 5 minutes. Candidates were also instructed to be prepared to answer attendee questions. This ensured that candidates developed a deeper understanding of their assigned tool rather than basic knowledge only. (See Appendix A for assignment instructions provided to candidates).

Utilization of Student Assignment for Service-Learning

The university's center for teaching excellence in partnership with the department of teacher education created a university-wide event. University faculty and staff were invited to attend the student showcase of educational technology.

During the showcase, faculty were provided a feedback form to fill out during each student's presentation and demonstration of educational technology (supplement 1). On this form faculty and staff were instructed to provide critiques in the following areas:

- Candidate knowledge of educational technology
- The presentation and demonstration of the educational technology
- The candidate's ability to answer questions regarding the educational technology presented
- The candidate's professionalism

Directly after the event faculty and staff were asked to fill out a survey about the event and the presentations they attended.

Results and Conclusion

Nine faculty attended the event and all were part of the College of Education and Behavioral Sciences or College of Liberal Arts. Faculty were from a variety of ranks including instructor, assistant professor, and full professor. When asked "How often do you use educational technology excluding the learning management system Moodle and video conferencing software Zoom in your courses?" 33 percent responded with always meaning they use an educational technology every single class. Forty-five percent of participants indicated they use educational technology occasionally or a few times during the semester and 22 percent of respondents indicated they use educational technology consistently or at least once a week or unit in their courses.

When asked if the student presentations are helpful in educating them on new educational technologies, 100 percent of the respondents answered "Yes". Eighty-nine percent indicated on the survey that they planned to adopt a technology that was presented by the students in future courses.

The researchers also requested faculty comments on the event. The following comments were:

"I enjoyed seeing candidates teaching faculty about educational technology and becoming the subject matter experts".

"Next time, provide a greater variety of technologies, many of the educational technologies presented were about google extensions which are great but I would love to see technologies specific to teaching my subject area"

"Continue doing this program for the university and in subsequent years, choose a campus location more centralized to the faculty community."

The faculty who attended this event use educational technology in their courses at least a few times a semester. All participants found the event to meet the objective of learning about educational technologies that were new to them. The majority of the faculty participants also indicated they planned to adopt a tool that was presented. The faculty who will not be adopting the technology presented by candidates may have educational technology that meets their instructional needs or did not have a tool presented that meets their current needs.

A key component of service-learning as defined by Bringle and Hatcher (1996) is to participate in an organized service activity that meets identified community needs (p. 112). This highlights the importance of community voice in the development, implementation, and assessment of the impact of a service-learning (Bringle & Hatcher, 2009). To address university faculty community needs we plan to have candidates engage with the faculty community earlier in the semester. This engagement may include surveying faculty on the challenges of using educational technology in the classroom. This will strengthen the project and provide a stronger community buy-in to attending the end-of-semester presentations. The low number of faculty and lack of diversity in colleges attending the event may be due to short notice in advertising the event to the university community and that the event was held at the end of the year when instructors are preparing for final exams and final assignments. In the future, the researchers plan to advertise the event earlier in the semester and choose a more centralized campus location for the event.

Service-learning for the preservice teacher candidates occurred during the candidate's summative assessment in which candidates researched and taught short lessons around educational technologies that professors and instructors in the university community could adopt in future semesters. This assignment meets the idea that *service-learning is academic work in which the community service activities are used as a "text" that is interpreted, analyzed, and related to the content of a course in ways that permit a formal evaluation of the academic learning outcomes (Furco, 1996; Zlotkowski, 1996).* Another core component of service-learning is for student participants to reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of personal values and civic responsibility (Bringle and Hatcher, 1995, p. 112). After the presentation day was complete, candidates were asked to reflect on their experience. Eighty-four percent of candidates felt their presentations went well or really well, eight percent of candidates felt their presentations went great, and eight percent felt that their presentations were "OK".

Example reflections from candidates

Reflection Prompt	Example of student responses
How did your presentation go? What went really well? What could have gone better?	*Overall I think my presentation went by smoothly. I was able to talk to a lot of my previous professors and share with them some google chrome extensions they maybe didn't know about! A thing I wish I could've done better was to find lesser-known extensions and possibly included more.* *My presentation went really well. I was nervous before the presentation, but when I actually started talking about my google tool, it seemed like all my anxiousness faded away. I was comfortable and very knowledgeable about Google Forms to the point where I did not have to refer to my slides. Personally, I do not feel like it could have gone any better because I explained really well, I accepted feedback and I was able to have professional conversations with important education faculty.* *My presentations went really well once I started talking to people. I was able to educate people who actually did not know much about Google forms and answered questions that they had about using the app. In order to make the presentation better, I wish I would have been more confident and comfortable talking to other professionals about such a simple topic.*

When candidates were asked to reflect on technologies they wish their professors would use, the majority mentioned Nearpod, Kahoot, Google Forms, and Google calendar. Interestingly the candidates reflected that many of the educational technology tools they recommend their professors use in their classes were the same tools they would recommend in a K-12 classroom. For example, when asked which tools would be most beneficial for K-12 classroom teachers, many candidates recommended Google Extensions, Kahoot, and Nearpod. The researchers also observed that candidates felt technologies like Quizziz and Book Creator would be beneficial in a K-12 classroom.

Example reflections from candidates

What are some tools you wish college professors should take more advantage of?	*Another tool I wish professors used more is google forms. One of my professors did use google forms and I really liked that she did. Forms are great for getting feedback from students, and they can access the forms at almost any time, anywhere.*
Provide a specific example	*Kahoot- This is an interesting application that allows review sessions for students. This website is very creative, and students love Kahoot. It is kid friendly and would work in all type of classroom settings.*
	I think another tool that professors should use is Nearpod.I have one professor who uses Nearpod and it definitely helps. With the Nearpod, it keeps me engaged in the lesson and allows me to learn and see everything up close. I can also provide and receive feedback which is a huge plus on my part.
	One tool I wish professors would use is Google Calendar. I think it would be super easy to check for due dates or dates for tests. The teacher would be able to share the calendar with the class so we can see the dates.
What are some tools you think K-12 teachers/students could benefit from?	I *think Kahoot or Quizizz are both good tools for students because it adds fun into learning. Studying might be hard for some students so having it in a game form can be really beneficial.*
Provide a specific example	*I think K-12 teachers/students would benefit from using Google Drive, Google Classroom, Kahoot, and Nearpod.*
	Google Docs and Google Slides I feel would benefit the best because it is a very easy app to use and it is a great way for students to organize their material and stay on pace with their assignments.
	Quizziz would be beneficial to teachers and students in k-12 classrooms because it is a platform for low-stakes quizzes. These quizzes can be completed from anywhere on any device. They can have accommodations available such as larger texts/pictures and read aloud questions/responses.

	A tool that I think is so cute and allows students to be hands on in their learning is Book Creator. This interactive tool allows students to create books related to what they are learning in an age appropriate and creative way

Finally, candidates reflected on how the activity helps prepare them for future presentations and the teaching profession. All reflections were positive, most responses indicated that the students will need to prepare notes or practice their presentations ahead of time. Some examples include:

This helped me prepare for presentations and lessons I will have to do in the future because not only did it show me a way of displaying my information, but it also allowed me to see the steps that would be necessary for a successful presentation. I learned that I must provide research and learn about my topic before I present it. Also, I must have a plan on what I will do and backups in case my idea doesn't go as planned.

My presentation went really well. I was nervous before the presentation, but when I actually started talking about my google tool, it seemed like all my anxiousness faded away. I was comfortable and very knowledgeable about Google Forms to the point where I did not have to refer to my slides. Personally, I do not feel like it could have gone any better because I explained really well, I accepted feedback and I was able to have professional conversations with important education faculty.

In this presentation, we had to teach listeners about something they knew little about. I was incredibly nervous, but in the future, I think my nerves will not be as prominent. Also, this presentation was like you were teaching a small class. Everytime someone would come up to you, you had to be professional, speak clearly and confidently. That is what teachers have to do every day.

This initial attempt to incorporate service-learning into a teacher preparation educational technology course was a success. The assignment increased meaningful learning and students' social engagement with fellow educators. Candidates were provided an opportunity to utilize their subject matter expertise to meet the needs of the campus community instructors as well as reflect on what they learned through this process and how it will better prepare them for the profession of teaching. The service-learning opportunity will be improved with additional community engagement earlier in the semester to identify faculty technology needs along with further student reflection on how they will incorporate the technology presented in their curriculum as a teacher.

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Appendix A

Course Assignment Instructions

Teacher Education Technology Tips Presentation

For this assignment, you will work on a slide presentation that you will present on the scheduled presentation day. Instead of giving a presentation to a large group of people, you will prepare a 2-5 minute sales pitch for your assigned tool. Presentation day attendees will be able to walk around the room to learn more about educational technology tools. They will stop by your 'station' to learn more about your tool and ask questions they have about how it can be used.

Your audience will be current Nicholls Education candidates and Nicholls faculty in the Education department and across campus. The goal is to promote educational technology tools that can promote interactive and engaging lessons at any Pre-K - 12 level or within college classes.

Presentation Day:

Thursday, April 28th

*Failure to attend on presentation day will result in required make-up work for this assignment.

Before presentation day

1. **Presentation slides:**
   Create slides to use when you present your topic. A template that you may use is provided or you can create your own slides from scratch. Ensure that you include all of the required information.
   This will count as 50% of your grade for this assignment.

2. **Become an expert:**
   Learn everything you can about your tool. On the presentation day, you will be the 'expert' on this tool. Ensure that you will be able to answer questions attendees may have about how to use the tool in their specific setting (K-12 classroom or college course).

3. **Sales pitch:**
   Work on a 'sales pitch' for your tool. Prepare to speak for 2-5 minutes about your tool.

This sales pitch should include a brief overview of the tool, how it works, how it can be used in a variety of settings, etc.

- ○ Also, prepare to give a 'product demo'. Log in or open your tool to show attendees what the platform looks like and how it works.

- ○ You will deliver this sales pitch and demo to any attendee that walks up to learn more about your tool.

Presentation day

Begins promptly at class time (9:00 or 10:30)

Location - 125 CEBS

Dress professionally:
Wear professional or 'teacher clothes' that you would wear to conduct observations or teach lessons for clinical experiences.

Arrive on time:
Plan to arrive at the presentation room at or shortly before class time so that instructions can be given and presentations can begin as soon as possible.

Display Your Slides:
Use any type of device (preferably a laptop or tablet with a large screen) to provide a visual aid for your sales pitch and to provide demonstrations of your tool in action.

- ● If you need to borrow a Chromebook or iPad please let me know at least 1 week prior to the presentation day so that it can be set up and ready for you to use on the day of.

Give Your Sales Pitch:
Present your tool to each person that stops at your station. Answer their questions and hold conversations with them about the tool.

Don't be Nervous:
The presentation room will be a no-judgment zone. A goal of this activity is to get you to practice presenting (or teaching) and communicating with other educators about a particular topic. As you move forward in your program and career, these are important skills to develop.

Earn a 5-Star rating:
Your goal with this presentation is to try to earn a 5-star rating. Each person that listens to your presentation will be asked to rate your presentation and the tool you are presenting. You will not be penalized for low ratings, but your goal is to present a tool to the best of your ability.

- This rating chart will serve as the observation instrument for your presentation. Instead of being rated on a rubric like you will be when teaching lessons, you will be rated using the chart provided below.

After Presentation Day

Reflect: Create a document and answer the following questions.

1. How did your presentation go? What went really well? What could have gone better?
2. How did this activity help to prepare you for future presentations or lessons you will teach in the future?
3. Locate the spreadsheet where links to all the Tech Tips Presentations have been submitted. Review slides created about the other tools. What are some tools you wish college professors should take more advantage of? Provide 2 specific examples.
4. What are some tools you think K-12 teachers/students could benefit from? Provide 2 specifics example.

Download your reflection document as a PDF to submit on Moodle.

For this assignment, you will receive points for creating the presentation slides, giving your presentation on the presentation day, and completing the reflection questions. Please ensure that you have completed each item in order to receive full credit.

Points breakdown:

Slides: 40 points

Presentation: 50 points

Reflection: 10 points

Total Points: 100

Teacher Education Technology Tips Rating Chart

Please rate the technology presentation you just participated in using the chart below.

Candidate Name: _____

Presentation Topic: _____

Presentation Rating - Circle the number of stars you give this presentation. Presentations should be rated based on candidate knowledge of the tool, confidence when presenting, ability to answer questions and overall professionalism of the presentation.

☆☆☆☆☆
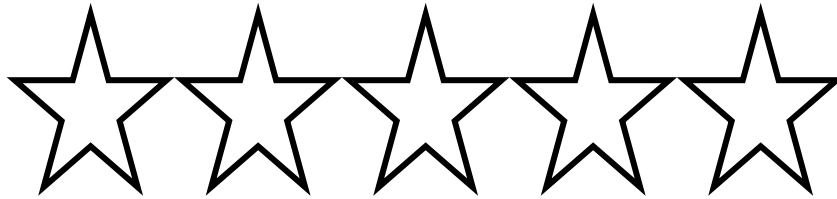
1 - 2 Stars: Needs improvement.

Please briefly explain your rating below:

Exploring Counselor Self-Efficacy Through a Service-Learning Project among Youth with Unique Abilities

Caitlin Frawley
University of Central Florida

Laurie O. Campbell
University of Central Florida

Viki P. Kelchner
University of Central Florida

Kathryn Babb
University of Central Florida

ABSTRACT

A service-learning project was conducted with counselors-in-training to increase self-efficacy for interacting with individuals with unique abilities/intellectual disabilities. Counselors-in-training (*N=27*) completed a semester-long service-learning project and took a pre and post assessment. The results indicated that self-efficacy improved for all counselors-in-training. The paired samples *t*-test identified that the mean increase in self rated self-efficacy was statistically significant with a medium to large effect size, *t* (26) = -4.052, *p* < .001, *d* = .742. However, the increase of self-efficacy was greater among the counselors-in-training who had no prior experience with individuals with unique abilities/intellectual disabilities.

Service-learning has been employed in higher education both within and outside of courses as a teaching method and instructional approach (Salam et al., 2019). Fields of study that employ service learning include nursing (Gresh et al., 2021; Hart, 2015; Mumba et al., 2022), teacher education (Resch & Schrittesser, 2021), science (Sewry & Paphitis, 2019), medical (Tiako et al., 2021), and social work (Claes et al., 2022). While not all higher education curricula utilize service-learning, some programs, such as counselor education, can incorporate service-learning through individual counseling, group counseling, social emotional instruction, career planning, and other field work experiences. Service-learning has been embraced in higher education (Bettencourt, 2015).

The robust nature of service-learning moves beyond a teaching approach to engaging in service to the community (Geller et al., 2016). However, communities are not necessarily defined by a geographical location but can be a group of people who share the same characteristics. One such community is individuals with intellectual disabilities. Since, counselors aim to increase the mental health and social wellness of individuals across the neurodiversity spectrum, service-learning has been identified as a potential powerful instructional approach for counselors-in-training (Langellier et al., 2020).

Counselors-in-training have noted they felt ill-prepared to counsel individuals with intellectual disabilities due to the counselors' lack of preparation and encounters with this diverse population (Rivas & Hill, 2018). Feelings of self-doubt or other expressions

of low-self-efficacy can affect how counselors intersect and interact with clients (Mitran, 2022). More specifically, low-self efficacy is connected to motivational issues. If a person lacks confidence that they can complete a specific task, it is likely that the task will either be avoided or resisted, or an attempt will be made superficially. The impact of low self-efficacy can lead to self-fulfilling prophecies of failure and contributes to learned helplessness (Margolis & McCabe, 2006).

Self-efficacy refers to the belief one holds about their ability to execute behaviors necessary to complete a specific task (Bandura,1977). The development of self-efficacy can be accomplished several ways by: (a) practicing and receiving positive regard for completing the task or behavior appropriately, (b) observing others successfully completing the task or behavior, (c) listening and acting on others' encouragement about personal capabilities, and (d) being intentional about practicing positive emotional, physical, and physiological states of mind (Bandura,1977; 2008). Therefore, the following exploratory pilot study examined the effect of service-learning on counselors-in-training self-efficacy.

Counselors-in-training' Self-Efficacy

Self-efficacy has been linked to counselors' performance, interest, and levels of comfort in a therapeutic role (Larson & Daniels, 1998; Lent, Hill & Hoffman, 2003). Therefore, counseling programs have designed curricula to build counselors' knowledge and skills (CACREP, 2016) which can lead to improved self-efficacy. Pragmatically, for counselors-in-training, self-efficacy can be fortified through active learning training exercises, service-learning, practicum, and internships (Ikonomopoulous et al., 2016). Mastery experiences such as service-learning activities, practicum, and internship can contribute to building self-efficacy for counselors (Bandura, 2008). Further, self-efficacy relates to an individual's self-evaluations which influence behaviors and experiences, including expenditure of energy towards reaching a goal, and the likelihood of attaining that goal (Carey & Forsyth, 2009).

Prior research of counseling programs' curriculum has noted deficits in providing training to work with individuals with unique abilities (Mitran, 2022; Smart & Smart, 2006). Deroche and colleagues (2020) recommended that counselor educators devote equal instruction related to disabilities in multicultural counseling classes to increase counselors-in-training preparedness. Bandura (1997, 2001) noted, preparedness and mastery experiences leads to self-efficacy (see Figure 1). Therefore, in the following section, we provide a review of service-learning, followed by an overview of how this approach can increase counselors'-in-training self-efficacy for interacting with diverse populations, including youth with unique abilities.

Figure 1

Developing Self-Efficacy
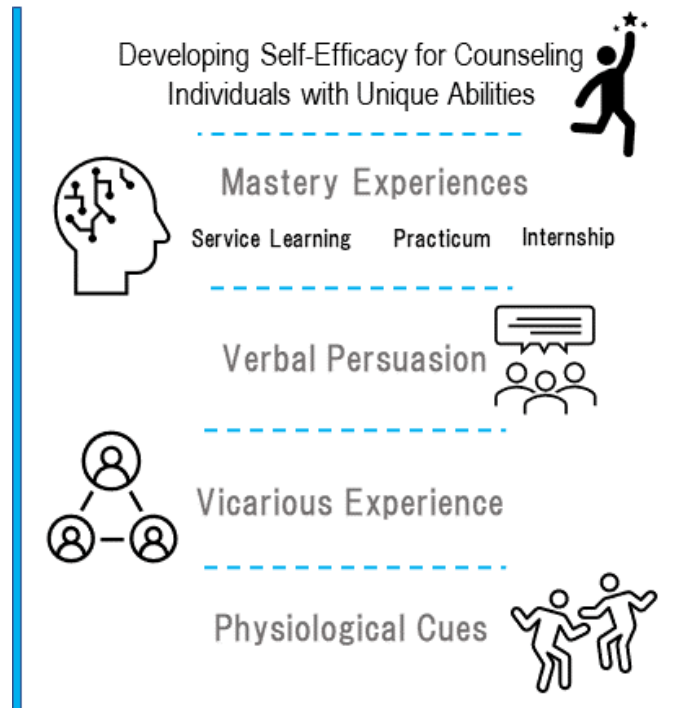
Service-Learning

Calls for employing service-learning opportunities in counselor education acknowledge the potential for the learning to increase awareness and advocacy for diverse client populations (Langellier et al.,2020). Benefits for counselors-in-training can be personal and professional. Counselors-in-training who engage in service-learning experience growth in (a) self-awareness (Langellier et al., 2020; Merrell-James et al., 2019), (b) clinical self-efficacy (Bjornestad et al., 2016; Midgett et al., 2016), (c) empathy (Keim et al., 2015; Merrell-James et al., 2019), and (d) understanding of their counseling advocacy roles (Farrell et al., 2020; Lee & McAdam, 2019; Lloyd-Hazlett et al., 2022).

Ehrlich (1996) provided a framework for service-learning, stating service-learning links community service to academic studies. Arnold and McMurtery (2011) explained, counselors-in-training who enter the profession without experiences or involvement with "real" people often express apprehension and uncertainty about their counseling skills. Specifically, service-learning is a beneficial tool for counselors-in-training to engage in

realistic counseling work prior to practicum experiences (Gehlert et al., 2014; Jett & Delgado-Romero, 2009).

Service-learning should include a structured time for counselors-in-training to engage in self-reflection (Thanasiu et al., 2018). The process of self-reflection allows for counselors-in-training to connect their experience to their professional knowledge, distinguishing service-learning from simply community service (Thanasiu et al., 2018). Participating in service-learning has been found to promote ongoing civic engagement (Langellier et al., 2020). Through participation in service-learning, there are multiple opportunities to engage and interact with clients. Service-learning should provide a reciprocal benefit for both learners and the community.

Youth with Unique Abilities/Intellectual Disabilities

For the purpose of this study, youth with unique abilities are those individuals under the age of 18 who have an intellectual disability. Throughout the rest of this paper, we have chosen to adopt assets-based verbiage (i.e., unique abilities) to describe youth with intellectual disabilities. United States Census Bureau (2022) data indicated that nearly 41 million Americans were living with a disability between 2016-2020. Additionally, one in six children have one or more disabilities (Center for Disease Control and Prevention [CDC], 2022).

Youth with unique abilities have the propensity to develop mental health challenges such as ADHD, conduct disorder, and anxiety (Lambros et al., 2016). Further, anxiety, depression, anger, loneliness, and rejection are more common in youth with unique abilities than youth without unique abilities (Hatch, 2009; Shechtman & Pastor, 2005). While a high proportion of youth with unique abilities endure mental health problems (e.g., anxiety, depression, trauma; Lever & Geurts, 2016), researchers revealed that only 10% of youth with unique abilities living with mental health diagnoses received mental health interventions (Einfeld et al., 2006). Therefore, it is likely that many counselors will interact with youth with unique abilities in their career, and thus, need to be prepared to support them. However, counselors' self-efficacy in working with youth with unique abilities may be low.

According to Kahveci (2016), counselors have historically had limited experience working with youth with unique abilities for a variety of reasons. First, working with clients with unique needs may be challenging for many counselors (Arman, 1998; Glenn, 1998). Second, some counselors may feel uncomfortable working with youth with unique abilities (Kahveci, 2016) due to bias because of inaccurate information or perceptions. Third, counselors may apply theory, skills, and interventions in varying ways, especially when working youth (Arman, 1998; Glenn, 1998; Reis & Colbert, 2004). When roughly 17% of children and 25% of adults living in the United States have a disability, counselors need to have the appropriate skill set to work with this population to ensure best outcomes for youth and families (CDC, 2022; Zablotsky et al., 2019).

Service-Learning with Youth with Unique Abilities/Intellectual Disabilities

Counselors-in-training expressed a lack of readiness and formal preparation for counseling individuals with unique abilities (Williams & Haranin, 2016). Mitran (2022) noted counseling preparation programs rarely address (and sometimes neglect) the unique abilities population. One reason that some programs may not incorporate the

unique abilities population may be related to accreditation standards. The CACREP (2016) *standards* for clinical mental health preparation programs do not directly reference the need for fostering counseling competencies related to servicing individuals with unique abilities, or other populations across the neurodiversity spectrum (Irvine, 2019).

However, counselors must be prepared to work with individuals with unique abilities, as they often endure high levels of co-occurring mental health disorders, such as depression, trauma, and other mental health disorders (Lever & Geurts, 2016). Therefore, it is important that counselors-in-training engage in service-learning programs to increase confidence and knowledge regarding working with youth with unique abilities. Service-learning is a promising approach to providing counselors-in-training with knowledge and realistic supervised clinical experiences working with youth with unique abilities. Through service-learning, counselors-in-training can apply their new knowledge toward working with youths with unique abilities.

The Present Study

It is important to investigate if adjunct service-learning programs can support counselors-in-training learners' self-efficacy for working with individuals with unique abilities. The aim of this study was to explore the self-efficacy of counselors-in-training to work with individuals with unique abilities before and after completing a service-learning program designed to support interaction with individuals with unique abilities. The research questions that guided this investigation were:

> RQ1 - How do counselors-in-training self-efficacy to work with individuals with unique abilities scores change after volunteering in a semester-long service-learning program for individuals with unique abilities?

> RQ2 - Do counselors-in-training with previous work experience serving individuals with unique abilities report differing self-efficacy levels, as compared to counselors-in-training with no experience?

> RQ3 - What are the differences in perceived knowledge, competence, and confidence responses for counselors-in-training and by subgroups?

Participants

We recruited 27 practicum-level counselors-in-training from a large university in the Southeast United States who sought a service-learning opportunity to interact with youth with unique abilities. Demographic data identified that all participants were women. We shared information about the service-learning program with students in the University counselor education program, and counselors-in-training volunteered to participate in the service-learning and data collection processes. The participants' ages ranged between 22 and 50, and most identified as being between the ages of 21 and 30 ($n = 25$; 92.6), and fewer participants were between ages 31-40 ($n = 1$; 3.7%) and 41-50 ($n = 1$; 3.7%). In terms of previous experiences, 13 participants (48%) reported having no previous experiences working with youth with unique abilities.

Procedures

We obtained approval from the university institutional review board prior to data collection procedures to ensure compliance with ethical research practices. We developed a Qualtrics survey that included the following (1) informed consent, (2) the 9-item self-efficacy for working with individuals with unique ability scale (Authors, 2022), and (3) a demographic questionnaire. We asked participants to create de-identified research participant identification numbers to support our abilities to match participants' pretest and posttest responses. Participants completed the first survey one week prior to the service-learning experience, and the posttest survey was distributed via email one week after the program was completed. We exported the Qualtrics survey data as a Statistical Package for the Social Sciences (SPSS; Version 29) data file for the purpose of data analysis.

Self-Efficacy for Working with Individuals with Unique Abilities Scale

We developed the *Self-Efficacy for Working with Individuals with Unique Abilities/Intellectual Disabilities Scale* ([SE-UA/ID]; Authors, 2022), a 9-item instrument that measures counselors'-in-training self-reported levels of self-efficacy as it relates to working with individuals with unique abilities. The SE-UA/ID includes items worded in statements, including the following sample items: (a) "I feel comfortable working with individuals with unique abilities." and (b) "I am confident that I am resourceful in finding solutions to unexpected problems when working with individuals with unique abilities." The SE-UA/ID includes three domains, *Knowledge* (Respondents indicated the extent to which they disagreed or agreed with each statement across a seven-point Likert type scale, ranging from 1 ("Strongly Disagree") to 7 ("Strongly Agree"). In the current study, the SE-UA/ID demonstrated strong internal consistency reliability ($\alpha = .928$).
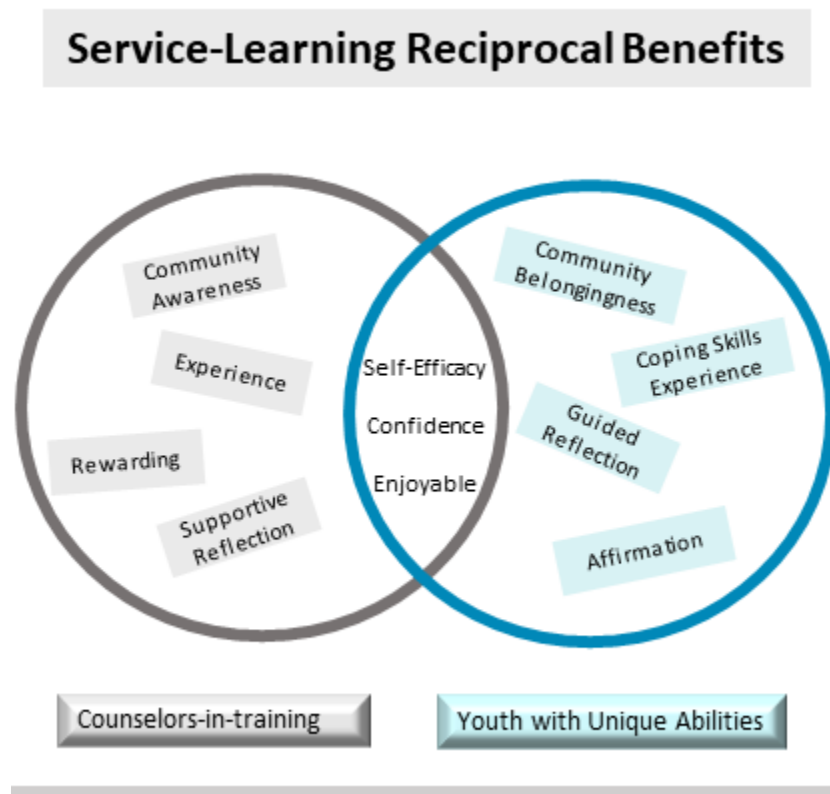
Service-Learning Project

We fostered a community-university partnership with an organization focused on promoting the wellness of youths with unique abilities. In establishing the partnership, we aimed to develop a service-learning project that offered reciprocal benefits for counselors-in-training and youths in the community with unique abilities. We identified a need for this project after a comprehensive review of counseling literature, as we found that a strong majority of counseling trainees feel unprepared to counsel and interact with youth with unique abilities upon graduation (e.g., Kahveci, 2016; Mitran, 2022; Williams & Haranin, 2016). In promoting counselors'-in-training development, we tailored the service-learning project to provide the following benefits to counseling trainees: (a) increased awareness of the unique ability community; (b) gain real world experience counseling youth; (c) attain personal fulfillment/reward through interacting with youths; (d) learn through supported reflection within encouraging supervisory relationship. For the youth receiving the service learning, we developed a program to support youths' increased: (a) community belonging, (b) coping skills development, (c) guided reflection, and (d) identity-affirmation. Through this service-learning project, we

aimed to promote self-efficacy and confidence through an enjoyable experience for both counselors-in-training and youth (See Figure 2).

Figure 2

Venn Diagram of Service-Learning Reciprocal Benefits

Service-Learning Reciprocal Benefits

Community Awareness
Community Belongingness
Experience
Coping Skills Experience
Self-Efficacy
Rewarding
Confidence
Guided Reflection
Enjoyable
Supportive Reflection
Affirmation

Counselors-in-training | Youth with Unique Abilities

Prior to the counselors'-in-training service-learning experience working with youth with unique abilities, a counselor educator who specialized in counseling with individuals with unique abilities facilitated a pre-programming training. The counselor educator provided instruction related to counseling facilitation strategies needed for competent clinical work with youths with unique abilities. The counselor educator covered the following critical content areas prior to the start of the service-learning program:

1) How to honor neurodiversity in the counselor-client relationship
2) Specific neurological considerations for service delivery (e.g., youths' attentiveness, social capacities)
3) Facilitating developmentally appropriate counseling approaches with pre-adolescents and adolescents (e.g., expressive arts and youth-friendly mindfulness exercises)

4) How to foster a neurodiversity-affirming therapeutic environment to help youth feel connected and capable
5) Exercising flexibility and adaptability while utilizing expressive arts with youth who are neurodivergent (e.g., choice-giving, respecting sensory processing differences such as sensitivities to textures or sounds).

During the pre-service-learning training, counselors-in-training were encouraged to ask the facilitators questions to ensure that they understood the content and training. Further, the counselor educator provided space for the counselors-in-training to process their reactions to the training and share their feelings about starting the service-learning program. Thus, in addition to providing training, the counselor educator focused on cultivating a safe and caring supervisory relationship with the supervisees - consistent with students' developmental levels as practicum level counseling students. Because these students were practicum-level counselors-in-training, the counselor educator considered developmental needs, including their needs for clear, concrete, and consistent feedback and instruction (Lambie & Stickl Haugen, 2021).

The Service-Learning Experience

The counselors-in-training facilitated seven expressive arts groups for youths with unique abilities over the course of one semester during their practicum. The service-learning program served as an additional learning experience for the counseling trainees to gain realistic clinical counseling experience servicing youth in the community. The counselors-in-training facilitated these groups under the supervision of a licensed mental health counselor and qualified supervisor with expertise related to counseling with youth and therapeutic work with individuals with unique abilities. The service-learning program was developed through a university-community partnership between the researchers' university and a community-based program dedicated to supporting wellness for individuals with unique abilities and neurodiversity. The counselors-in-training facilitated the 1.5-hour expressive arts groups in a private counseling space at the university. Each week, the facilitators started the groups by introducing and practicing a youth-friendly mindfulness exercise and/or meditative activity to help ground the youth and to introduce exercises that the group members could utilize outside of the group (e.g., at home, school, etc.).

Each week, the facilitators met with the counselor educator and a doctoral-level counselor education student to review group curriculums and provide feedback to counselors-in-training. The counselors-in-training worked together to plan sessions, choose expressive arts activities, and discuss objectives and goals for each group. The counselor educator encouraged counselors-in-training to provide rationale for their expressive arts activity choices, as well as list clear objectives associated with each activity, to promote counselors'-in-training understandings of the importance of selecting expressive activities with intentionality. During these weekly meetings, the counselor educator and doctoral student focused on encouraging the counselors-in-training efforts and communicating their trust in the counselors-in-training capacities and developing competencies related to servicing youths with unique abilities.

Data Analysis

To calculate the *Self-Efficacy for Working with Individuals with Unique Abilities/Intellectual Disabilities Scale* score, all responses were summed. Higher scores indicated a great level of self-efficacy. Assumptions were evaluated and all assumptions were met. An examination of a histogram indicated that the data was normally distributed and there were no outliers. Next, a paired samples *t-test* was conducted to compare the pre-assessment to the post-assessment. Next, scores were calculated for knowledge (2 items), competence (3 items), and confidence (4 items) questions and analysis included the pair samples t-test. Finally, the cases were split on those who had previous experience working with individuals with unique abilities ($n = 13$) and those that did not ($n = 14$). Paired samples t-test were calculated based on the split cases of the pre and post assessments and the knowledge, competence, and confidence questions.

Results

To examine whether participants experienced changes in self-rated self-efficacy for working with individuals with unique abilities after the service-learning program, we conducted a paired-samples *t*-test of the two administrations of the self-efficacy scale. We identified a mean increase in students' self-rated self-efficacy scores from pre-assessment ($M = 49.4074$, $SD = 8.55866$) to post-assessment ($M = 54.5556$, $SD = 4.81451$). The mean increase in self-efficacy was 5.15 with a 95% confidence interval (CI) ranging from 2.54 to 7.76. The paired samples *t*-test identified that the mean increase in self rated self-efficacy was statistically significant with a medium to large effect size, $t(26) = -4.052$, $p < .001$, $d = .742009$.

To answer RQ2, we created a new variable titled *First Time* (i.e., prior experience working with individuals with unique abilities and those who did not). First, we examined group-level differences at the pretest point to examine whether participants with prior experiences entered the service-learning program with stronger levels of perceived self-efficacy. Descriptive statistics indicated that participants with prior working experiences reported higher perceived self-efficacy at the pretest point ($M = 53.29$) than participants with no prior working experience ($M = 45.23$). The results indicated that counselors' previous experiences impacted pretest perceived self-efficacy ratings.

Next, we computed the paired samples *t*-tests while splitting the data by previous work experience. Individuals with no prior experiences working with youth with unique abilities demonstrated the most significant self-efficacy gains. For participants with no prior experiences, our results suggested a mean increase in their self-rated self-efficacy scores from pretest ($M = 45.23$, $SD = 9.2$) to posttest ($M = 52.85$). For individuals with no prior experiences, the mean self-efficacy increase was 7.62 ($SD = 8.38$, $p = .003$), and the mean increase was statistically significant, $t(12) = 3.276$, $p = .003$. For the participants who reported having previous working experiences with youth who have unique abilities, these participants experienced mean increases in self-efficacy from pretest ($M = 53.29$) to posttest ($M = 56.143$). For participants with previous working experiences, the 2.86-point mean increase in perceived self-efficacy was statistically significant, $t(13) = 3.285$, $p = .003$.

Next, to answer RQ3, we examined the SE-UA scale by question type: knowledge, competence, and confidence. At the pretest point, participants with previous

experiences working with youth with unique abilities reported higher levels of perceived knowledge (previous experience, *M* = 12.07; no previous experience, *M* = 9.15), competence (previous experiences, *M* = 12.92; no previous experiences, *M* = 14.61), and confidence (previous experiences, *M* = 24.28; no previous experiences, *M* = 21.46). After examining pre-service-learning differences among participants based on their previous working experiences serving youth with unique abilities, we examined whether individuals experienced different efficacy gain levels based on their previous working experiences. We computed three paired samples *t*-tests and identified that participants demonstrated mean pretest-posttest increases in *Knowledge* (*M* = 1.82, *SD* = 2.39, *p* <.001), *Competence* (*M* = 1.04; *SD* = 2.56, *p* = .045), and *Confidence* (*M* = 2.3; *SD* = 3.9, *p* = .003). Then we examined changes in participants' perceived knowledge, competence, and confidence, accounting for previous experiences with youths with unique abilities. We computed three paired *t* tests to examine participants' changes in knowledge, competence, and confidence from pretest to posttest, based on previous experiences working with youth with unique abilities. Our results suggested that participants experienced gains in self-efficacy across the three factors; however, participants' previous working experiences influenced the results. For the *Knowledge* domain, participants with no prior related work experience demonstrated stronger gains (*M* = 3, *SD* = 2.582; *p* < .001) than individuals with previous experience (*M* = .714; *SD* = 1.55; .058). In the *Competence* domain, the participants with no prior experiences reported more gains (*M* = 1.77; *SD* = 3.2; .036) than those with previous experience (*M* = .36; *SD* = 1.55; *p* = .202). For the *Confidence* domain, individuals without previous experience (*M* = 2.85; *SD* = 5.0; *p* = .032) and with previous experiences (*M* = 1.8; *SD* = 2.83; *p* = .017) experienced similar efficacy-related gains.

Discussion

We conducted a quantitative pilot study to examine counselors'-in-training self-efficacy for working with individuals with unique abilities after participating in a community service-learning project. The aim of the program was for the counselors-in-training to provide services to youth with unique abilities inclusive of: (a) individualized support to build affirmation, (b) fostering belongingness, (c) community awareness of others like them, and (d) coping skills experience that transfer from the project to home living.

The counselors-in-training voluntarily engaged in a semester-long project that began completing the pre-assessment, and subsequently completing a training focused on developmentally and ability-affirming ways of interacting with the youth clients. After the training, the counselors-in-training participated in a service-learning program and gained experience facilitating expressive arts counseling groups with youths with unique abilities. These groups included completing an expressive arts activity (e.g., wellness mandalas and safe place collages). Further, there were supported discussion and reflections of their interactions during the day and with others. In turn, the counselors-in-training gained formative feedback on their session planning and treatment objectives. Throughout the program, the counselors-in-training were supported by training, reflection, discussion, and supervision by the counselor educator.

The counselors-in-training in this study experienced growth in their self-efficacy as indicated by the increase in their self-efficacy scores after completing a service-learning program with individuals with unique abilities. These results are similar to other counselor education service-learning experiences found by Thanasiu and colleagues (2018), Long (2016), Zimmerman and Cleary (2006), Richards and Levesque-Bristol (2016), and Gonsalves and colleagues (2019) across multiple disciplines including counselor education, play therapy, nursing, engineering, information technology, world language, and information technology (Richards & Levesque-Bristol, 2016).

The pre-assessment results indicated that counselors-in-training who had not had prior experience working with individuals with unique abilities had lower self-efficacy than those who had prior experiences. Our results are consistent with previous research findings that suggested low self-efficacy for working with individuals with unique abilities stems from lacking supervised clinical experiences and counseling curriculum gaps (Mitran, 2022; Williams & Haranin, 2016). Rivas and Hill (2018) revealed that counselor trainees who lacked instruction felt ill-prepared, anxious, and frustrated, all physiological cues linked to low self-efficacy.

There were differences in domain-specific self-efficacy gains in knowledge, competence, and confidence among counselors-in-training based on their previous working experiences. Our findings suggested that counselors-in-training with no prior working experience with youth with unique abilities evidenced the most significant gains in self-efficacy scores after completing the service-learning project. Interestingly, all participants experienced similar improvements in confidence-related self-efficacy. This is important, as practicum-level counselors-in-training often function at the earliest supervisee developmental levels, which involves low levels of confidence and high levels of dependence and anxiety (Bernard & Goodyear, 2019; Stoltenberg & McNeill, 2010). Therefore, service-learning opportunities may help promote counseling trainees' development as clinicians, moving from early developmental characteristics (e.g., low self-confidence, high dependency, low awareness of personal strengths and weaknesses) to high levels of counselor development (e.g., greater autonomy, lower anxiety, increased problem-solving abilities; McNeill & Stoltenberg, 2016).

Therefore, service-learning opportunities for pre-practicum to practicum level counselors-in-training may be vital, especially for counselors-in-training with limited previous working experiences with youth with unique abilities. While this study did not focus on the benefits of the program for the youth who attended the program, parental feedback substantiated marked improvement in their youths' social interactions and emotional competence/regulation. Further, the parents noted that their youth looked forward to the program and often replicated what they learned in other settings such as school and at home.

A limitation of the current pilot study was the lack of a control and/or a comparison group. Without a control or comparison group, we were unable to determine whether changes in perceived self-efficacy were specifically due to participation in the service-learning program. Iterations of this study might consider including a control group. While we examined the differences between prior experience and no experience with individuals with unique abilities, we did not consider the counselors-in-training developmental levels. Thus, future researchers might examine the effects of a similar service-learning program when counselors-in-training are compared to others at similar

developmental levels (e.g., pre-practicum, practicum, internship-level, or those who have not received service-learning).

Future implications for counselor education includes employing service-learning activities for multicultural competence such as working with individuals with unique abilities not only as a service to the community but to support the knowledge, skills, and self-efficacy of the counselor-in-training (Arman & Scherer, 2002; Barbee et al., 2003; Jett & Delgado-Romero, 2009). While this study focused on the benefit of improved self-efficacy with the counselors, future studies could consider measurable benefits for the youth with unique abilities. Anecdotal evidence from parents continues to support service-learning projects. However, measuring their perceptions of belonging, connectedness, and self-confidence after engaging in a counseling-community service-learning program.

Conclusion

The current study explored the self-efficacy experienced by the counselors-in-training interacting with the youth in a service-learning program. Individuals' self-efficacy were reshaped because of their participation in the service-learning project for youth with unique abilities. Counseling trainees who began their service with no prior working experiences with youths with unique abilities reported lower levels of self-efficacy for working with youth at the start of the service-learning experience. After completing the six service-learning project sessions, the counselors-in-training reported statistically and practically significant increased self-efficacy levels. A large proportion of counselors report low levels of self-confidence and readiness to counsel individuals with unique abilities; thus, counselor educators may strengthen novice counselors' perceived readiness and confidence for working with individuals with unique abilities through service learning, and these competencies may be developed in as few as six weeks.

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