ABSTRACT

Service-learning is a form of experiential-learning being incorporated into many academic programs to enable students to practice skills learned in class while providing a service to communities in need. Being able to justify the implementation of service-learning experiences can be a challenge. Some benefits include increased awareness of global health, development of comparing and compassion for the community and patients, development of critical and clinical thinking, and practice of skills learned.

This study assessed Core Value Self-Assessment of students from a cohort of entry level Doctor of Physical Therapy students who had a mix of participation in service-learning (local, regional, and international). It was hypothesized that students who participated in international service-learning experiences would score higher on the Core Value Self-Assessment tool (total score and each individual core value). One -Way ANOVAs were used to assess the data. Results found that international service-learning participants scored highest in social responsibility. The results were not statistically significant. Participation in service-learning is an option to consider for experiential learning to help develop professional behavior. Future research could consider Core Value Self-Assessment pre and post service-learning experience to consider more causative relationship between service-learning and Core Value Self-Assessment changes.

INFLUENCE OF INTERNATIONAL SERVICE LEARNING ON DPT STUDENT PROFESSIONAL BEHAVIOR DEVELOPMENT

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Over the past decade, Doctor of Physical Therapy programs have incorporated service-learning experiences into the curriculum, working collaboratively with local, regional, and international communities. This is in response to the growing emphasis on the globalization of healthcare. Pechak and Thomas (2011) defined the concept of globalization as the "social, educational, and business interactions that lead to progressive standardization across cultures and borders" (p. 226). The World Confederation for Physical Therapy (WCPT) supports the work of establishing equality across boarders through the mission to promote appropriate healthcare with trust and dignity (WCPT, 2020).

Service-learning (SL) is a type of experiential-learning, where students apply classroom knowledge to a structured, real-life activity while providing service to a community in need (Boysen et al., 2016; Bugnariu et al., 2015; Crandell et al., 2013). Doctor of Physical Therapy (DPT) programs can incorporate SL experiences to promote service participation, civic engagement, and to improve awareness of health concerns and practices. The inclusion of SL is not required for program accreditation, but does help meet some criterion, such as professional behavior development, practice exposure, providing service to those in need, and experiential learning to reinforce classroom learning (Clark et al., 2015; Pechak & Thompson, 2011). Professional behavior is reinforced by these Core Values, including professional duty, altruism, and compassion.

Service-learning can be created in several formats, including local, regional, and international locations. Local and regional service learning (RSL) experiences involve providing needed services within the local area or region in which the program resides, such as the surrounding county or within the country (for the programs accredited by CAPTE this is the

United States). International Service-Learning (ISL) is the implementation of SL in a different country, providing needed services that were identified in program planning and development. The challenge that falls upon these academic programs is to provide evidence that the SL experiences are worth the financial cost of establishment and execution.

The American Physical Therapy Association (APTA) Core Value Self-Assessment is a standardized tool that incorporates personal reflection by a physical therapist or physical therapy student in assessing personal performance on identified core values. This assessment tool is used to steer and assess professional development in physical therapists and physical therapy students. This study will use the APTA Core Values Self-Assessment tool to identify difference in scores between groups of students who participated in local and international service-learning experiences.

A challenge is that it is not yet concretely determined how the ISL experience impacts the professional behaviors of DPT students. Many DPT programs are establishing ISL experiences as part of their elective curriculum. ISL experiences in DPT programs require a strong rationale and sufficient resources to gain acceptance and prevent opposition, including the potential argument of educational time being lost when students are outside of the classroom. Following the promotion of globalization of healthcare by the WHO and WCPT, ISL for educational institutions incorporated hands-on, service-based experiences grounded in academic teaching and volunteer services in an international community where a need was identified (WCPT, 2020; WHO, 2020).

Purpose of the Study

The purpose of this quantitative quasi-experimental study was to identify the impact of an ISL experience on the professional behaviors of U.S. entry-level DPT students. The Commission on Accreditation for Physical Therapy Education (CAPTE) has noted the importance of professional behavior and requires DPT students to demonstrate the American Physical Therapy Association (APTA)'s identified Code of Ethics and Core Values. The APTA has developed a standardized tool for assessment of professional behaviors through the Core Values Self-Assessment tool. This tool represents the seven identified core values that are assessed via Likert scales which are totaled for a total core value self-assessment score and 7 sub-section scores. Differences in Core Value Self-Assessment total scores and within the seven core values were assessed during this research to identify differences surrounding the SL experience. Identified differences in core values could help guide program development to help promote professional development as defined and promoted by the APTA. Participants were recruited from an Appalachian based entry level DPT program that offers varying levels of SL within the curriculum (local, regional, and international). Three groups participated: those who participated in regional SL, those who participated in ISL, and those who did not participate in either regional SL or ISL.

The following research questions guided this quantitative quasi-experimental study:
- Was there a significant difference in DPT student total scores on the APTA Core
- Values Self-Assessment tool after an international service-learning experience compared to those who did not attend a service-learning experience or who attended a regional service-learning experience?
- Was there a significant difference in DPT student perceptions of individual core values after an international service-learning experience as measured by the APTA Core Values Self-Assessment tool as compared to those who did not attend a service-learning experience or those who attended a regional service-learning experience?

Service-learning (SL) is defined as "experiential learning in which a community's needs are met while incorporating academic learning and meeting academic outcomes" (Reynolds, 2009, p.3). A key component to SL is the link between academic outcomes and SL experience goals; this distinguishes SL from volunteering, where there is not academic connection. Hayward et al. (2017) note that SL facilitated student growth in improved cultural competence, appreciation of professionalism and core values, and enhanced collaboration and communication. Brigle and Hatcher (1995) expanded on this definition, stating that SL is a method to gain further understanding of course content and grow a broader appreciation for the profession as well as civic responsibility. This process of practicing and working to meet a community need with incorporated reflection follows the direction for Kolb's writings regarding experiential learning (Nadioo et al., 2018).

The experience of providing service via experiential learning during SL in communities in need occurs both domestically and internationally. Hall et al. (2018) mentioned that SL is a means for reciprocal learning and benefit for both the involved students/university and the host community. Prior to SL implementation, community partner needs should be identified. Community partner needs could include a wheelchair clinic, gait assessment, wound care, positioning, consultations, and evaluation and treatment recommendations. The needs of the community partner are met during SL while the students benefit from the process of patient interaction, time to practice learned skills, and decision making, and the process of reflection. Five recommended characteristics of SL from Liu and Lin (2017) include "collaboration, reciprocity, diversity, learning orientation, and social justice" (p. 240). Collaboration is important between the academic program and community partner, facilitating a strong relationship. Reciprocity occurs through SL as both parties benefit from the collaboration. The learning aspect is important when linking the service component to the academic component in developing a SL experience, remembering that the experience is to help students in their educational journey.

The hands-on experience allows students to become more confident in their skills and resource usage and realize the value of compassion and caring (Brown & Bright, 2017; Ivers, 2019). The students are able to practice talking to community members, learning to communicate effectively and respectfully. Hands-on skills are demonstrated by faculty and students, including communication and decision making. Students reported that the SL experience confirmed their decision to be a physical therapist (Collins et al., 2019; Danzl et al., 2019). Research has found students report

decreased anxiety in practice following SL experience, feeling more confident in their knowledge and hands-on skills (Bugnariu et al., 2015). In SL experiences, working to meet a community's needs and providing professional services benefited the students in enabling them to realize their skills.

Pros and Cons of Service-Learning

Gaster (2011) wrote about the pros and cons of SL. Benefits to the student included: personal goal development, fostering sense of caring, collaboration, enhancing content comprehension, exploration of values, ethics, and civic engagement, and encouraging students to become lifelong learners and be aware of social and political issues. As students work to help meet community needs, they should incorporate social and political factors to ensure services and behaviors are appropriate.

Students were able to practice skills and decision making, helping one another with modeling and teaming. Faculty were able to guide with modeling and probing questions. The SL experience allows students to interact with faculty outside of the classroom. Seeing faculty practice professionally helps provide professional models for students. The interaction between faculty and students facilitates development of communication and problem solving.

Identified benefits for the community included: exposure to learning experiences, building collaborations, and partnerships, meeting community needs, and addressing community issues with funding for education, healthcare, public safety, and the environment (Danzl et al., 2019; Gaster, 2011). A critical component of SL and a means to assess the benefits or outcomes of SL is reflection. The reflection component is important to the SL process (Anderson et al., 2014). Davis (2013) described reflection as the bridge between the service component and the educational content. Reflection allowed for participants (students, faculty, and community partners) to assess personal beliefs and values in comparison to academic and community outcomes and needs (Clark et al., 2015; Crandell et al., 2012; Garcia-Romero et al., 2018). Students reflected on topics including personal challenges, lessons learned, and personal goals to work on. Faculty reflected on preparedness of the group, student performance, and the group's ability to meet the community partner's needs. The community partners reflected on their perception on how the students performed and if their needs were met.

Sandaran (2012) noted that SL is different from volunteering in that it focuses on the learning and service combination ensuring that the service provider and recipient both benefit from the partnership. SL is not necessarily a replacement to clinical experiences required by CAPTE but can be used to prepare students for these clinical placements.

Some PT programs place SL as an elective course for students within curriculum, while other programs have SL experiences as a requirement for graduation. Nowakowski et al. (2014) found that these experiences facilitated DPT programs addressing public health issues, health promotion, safety, mobility, physical performance, and professionalism (Collins et al., 2019). The SL experiences allowed DPT students to engage in interprofessional collaboration and caregiver/family training. These experiences aided students to grow with situated cognition, critical thinking,

content knowledge, and tool usage (Danzl et al., 2019; Rincon and Castillo-Montoya, 2018). Service-Learning enabled DPT students to learn content in the classroom and apply it in a real-world setting, then follow with reflection to assess personal learning and growth within the field (D'Appolonia Knecht et al., 2020; Ricon & Castillo-Montoya, 2018). Service-learning experiences vary greatly in timing and focus. Connecting an SL experience to academic outcomes is important to show the pertinence of the experience, which allows programs to justify development to students and administration.

Local Service-Learning

Local service-learning (LSL) focuses on services provided to the local community in need. Due to shorter distance to travel to the identified community partners, LSL can occur more frequently for shorter periods of time. LSL does not necessarily require the same amount of planning or expenses for travel. This type of set up would include the establishment of a pro-bono clinic to help meet community medical needs. A benefit to this type of experience is the connection created between the academic institution and the community and the more frequent contact with those in need.

Regional Service-Learning

Service-learning can be developed on a number of levels. One way to categorize SL is by the location of the service or location. Some complete SL at a local level, working with community partners in the area surrounding the academic institution. These activities can include health fairs, screenings, and community education programs. Regional SL may expand the idea of SL, but within a given region surrounding the facility. These programs can expand to being more involved with immersion into a new community away from the school where students meet the needs of the community partner. This approach to SL can be beneficial to meet the needs of underserved communities that have a shortage of healthcare practitioners or facilities. These programs can help students become aware of healthcare programs, strengths and weaknesses, and other needs within their community and region. Expanding further, some programs move to work with international community partners. Regional SL exposes students to regional cultural differences. This exposure can help students realize differences close to home, such as socioeconomic differences, religious differences, and healthcare availability. Understanding community differences enables students to be more aware of community needs and how to best meet these needs.

International Service-Learning

International Service-Learning (ISL) is an extension of SL, expanding services to communities and countries in need. This work helped to strengthen student skills, improve collaborative decision making, cultural responsiveness, and concern for other communities and populations (Collins et al., 2019; Crawford et al., 2017; Eidson et al., 2018). Prior to their ISL experiences, students reported some anxiety regarding

personal preparedness for the experience, skill level to meet the needs of the community, and being prepared to interact with patients from a different culture and country. It was recommended that ISL be supported by the implementation of multicultural teaching and reflection as well. Inclusion of intercultural sensitivity is recommended to better prepare students to work in an international setting (Chapas-Cortez, 2019; Ferrillo, 2020; Liu & Li, 2017; O'Sullivan et al., 2019; Peterson et al., 2015). Preparing students prior to the experience, educating students on what cultural traditions and values are, healthcare systems and education, and needs of the community are help students be more effective during their trips (Peterson et al., 2015).

Students have reported that these experiences have helped them feel more confident in the ability to have personal success, provided a new view of the world, confirmed decisions to go into the physical therapy profession, and facilitated professional development (Crawford et al., 2017). Studies have shown that ISL also helped to promote professionalism in the development of the APTA core values, such as altruism, compassion/caring, integrity, and professional duty (Borstad et al., 2018; Reynolds, 2009). Interaction with patients, peers, faculty, and community members and the process of reflection can facilitate student growth professionally and personally. Merritt and Murphy (2019) discussed the role of ISL in allowing students to study global health and develop clinical skills and cultural competencies. This process follows the work of Kolb, who suggested incorporating experience and reflection into experiential learning (Ferrillo, 2020). After analyzing reflections following an ISL experience, Borstad, et al. (2018) identified student usage of core value terminology in written reflection without prompts.

Developing an awareness of global issues and cultural competence is essential in health profession education (Boysen et al., 2016; Collins et al., 2019; Hall et al., 2018). This supports the mission and Code of Ethics from CAPTE and the APTA and was pertinent given the diversification of the populations living within the United States. The WCPT encourages academic programs worldwide to prepare students to work with clients from different countries and experience diversity in healthcare worldwide (WCPT, 2020). Students reported personal growth in the following areas after an ISL experience: acceptance of cultural and communication differences, ability to let go and be accepting of uncertainty, confidence in oneself as a professional, awareness of global healthcare issues, and affirmation of career path (Audette, 2017; Collins et al., 2019; Elverson & Klawiter, 2018). Similar to studies assessing SL, Liu and Lin (2017) found that students reported decreased anxiety post ISL experience with improved awareness of barriers to healthcare services.

Service-Learning and Physical Therapy Education

The direct exposure to diverse patients and a community in need allows students the opportunity to incorporate hands-on skills and academic learning with professionalism, critical thinking, and problem solving in a safe educational environment.

About thirty percent of Doctor of Physical Therapy programs mention ISL in curriculum and program descriptions (APTA, 2019c). Many DPT programs offering ISL as part of their curriculum voice concerns about program viability (Collins et al., 2019;

Eidson et al., 2018). These ISL experiences are structured to support program and academic outcomes, including professional development, skill demonstration, communication, inter-professional experiences, and awareness of the global community (CAPTE, 2019).

Academic outcomes matching to SL objectives are unique per programs, meaning the purpose for the experience are distinctive per the developing program. One commonality between programs that offer SL and ISL as part of the curriculum is the use of experiential learning (Eidson et al., 2018). Recognizing the impact of hands-on learning, clinically applying skills, and learning from personal reflection reinforced the value of ISL experiences within DPT programs, but this recognition has little research to support its value (Bandy, 2011; Borstad et al., 2018; Elverson & Klawiter, 2018).

Identifying and connecting with local participants is an important step in SL (Audette, 2017; Eidson et al., 2018; Hayward & Li, 2017). Community partners are those in the population, either individuals, groups, or institutions, with which the group participating in the SL experience will collaborate. The communicated needs and desires of stakeholders help establish the SL activities, outcomes, and purposes (Hayward & Li, 2017; Uy, 2019). Reflecting on the ability of the SL group to meet the local community needs can help determine if the trip was a success from the perspective of the community, and thus encourage the participants to continue with the SL groups.

ISL experiences are opportunities for students to provide services to a community in need within a different country than their own, by working with patients and applying the skills and knowledge learned in school (Stetton et al., 2019). The SL and ISL work allow for gaps in national and global healthcare to be identified and addressed.

Assessment and modification of the SL experience should occur on an ongoing basis, and should consider input from students, the educational institution, faculty, and community partners.

As part of the APTA Vision 20/20, the APTA noted professionalism as a priority (Denton et al., 2017). Vision 20/20 defined professionalism as "physical therapy practitioners who consistently demonstrate behaviors related to the APTA's 7 core values in their practice and interactions with other professionals to help advocate for the health of the community" (Guenther et al., 2014). In 2007, the APTA introduced Professionalism in Physical Therapy: Core Values (APTA, 2019b). A team of selected physical therapists worked together to identify seven core values: accountability, altruism, integrity, compassion/caring, excellence, professional duty, and social responsibility (APTA, 2019a; Denton et al., 2017). Each of the identified core-values was expanded to include sample indicators to help explain what each value represented.

The core values were used to create the APTA's Professional Core Values Self-Assessment tool (Anderson et al., 2016; Guenther et al., 2014; McGinnis et al., 2016). This self-assessment tool was developed to assist physical therapy professionals and students with professional reflection and to gauge their core values in comparison to those established by the APTA to assess and develop professional behaviors (Denton et al., 2017). The committee identified sixty-eight sample indicators, and each is rated on a five-point Likert scale. Resulting scores can help identify core-values to work on or

to grow upon. Anderson (2015) found that the Core Values Self-Assessment tool demonstrated internal consistency, reliability, and test-retest reliability when used with Doctor of Physical Therapy students while comparing student scores before their first clinical rotation to scores following their second clinical rotation. Denton (2017) and Anderson (2015) both found the APTA Core Value Self-Assessment tool to be reliable with the DPT student population when considering changes in core values during academic work and clinical rotations. The APTA Core Value Self-Assessment tool has been found valid in assessing change in core values surrounding academic training and clinical education, which makes it an ideal tool to measure changes pre and post ISL (Guenther et al., 2014).

This project utilized a quantitative quasi-experimental design using a between-subjects design that compared APTA Core Value Self-Assessment scores of DPT students enrolled in an entry level DPT program who attended a regional or ISL experience to those in the program who did not participate in a service-learning experience. Participants received an email to obtain consent as well as the electronic assessment tool. The students' clinical education director sent the e-mails twice over a 3-week period. The clinical education director sent out a third round of e-mails for further recruitment of participants to help increase participation and interest. An online assessment tool was made of demographic questions: age, gender, type of service learning participated in, and the APTA Core Values Self-Assessment tool that was used. Each participant completed the self-assessment one time, so that no further identifying information was collected.

A convenience sample was used, recruiting a single cohort of students from a U.S. based entry-level DPT program to participate in the research. Convenience sampling is a type of nonprobability sampling in which the participants are recruited from a convenient population identified by the researcher (Hammond et al., 2015). Inviting a single cohort from a DPT program that offers SL helped minimize differences among the three groups assessed (no SL experience, regional SL experience and ISL). All participants were finished with their didactic coursework and were participating in their third clinical education rotation. Of the 53 students, about 1/3 of the cohort attended regional SL, 1/3 ISL, and 1/3 did not attend a trip due to cancellations related to COVID-19. The participants were recruited from this particular cohort as a convenience sample that the researcher had access to, and who meet the inclusion criteria of the study. The participants were recruited via email sent by their clinical education director inviting them to participate in the study (including a brief study description). After the individual participants agreed to participate, they received a link to the online consent form with a description of the survey. At the end of the consent, participants received a link to the online assessment. By completing the online assessment and submitting it, the participant provided implied consent, as was explained in the consent form. Data was saved in passworded datasheets and SPSS files on a password protected computer.

Data analysis, completed with SPSS version 23, included completion of computing variable values, or sub-section scores, for each of the seven core values (accountability, altruism, compassion/caring, excellence, integrity, professional duty, and social responsibility) and a total core values score (all core value scores combined). These values were used to compute multiple One-Way ANOVAs, which assessed

differences between the three groups of service-learning experience (no service-learning, regional service-learning, and international service-learning). Analysis included descriptive statistics, such as group score means.

This research assessed the potential impact that service-learning (SL) experience may have on entry-level DPT student professional behavior development by assessing student scores on the APTA Core Values Self-Assessment. The selected cohort of students had the same academic preparation but varied by service-learning experience. These students were assessed during their seventh term of DPT school, placing them in the latter end of the program when the Core Value Self-Assessment tool was found to be more valid.

The results of this study were congruous with the current literature that shows a difference in student self-assessment of core values, although not statistically significant. Service-learning is experiential learning, which integrates hands-on skills application based on academic knowledge with the provision of service to a community in need. The design of SL should align with the objectives of the learning experiences and program/student learning outcomes. Prior research has found subjective reports of improved professional behavior development through SL participation (Anderson et al., 2014).

The results of this research found that students from the identified cohort of a DPT program who participated in regional service-learning (RSL) reported a higher score on the APTA Core Values Self-Assessment total score than those who did not participate in an SL experience or those who participated in ISL. This indicates the possibility that RSL leads to a greater development of professional behaviors and core values development than no participation or participation in international service-learning (ISL). The RSL participants were found to score higher on accountability, altruism, compassion/caring, integrity, professional duty, and total core value score than those who did not participate in an SL experience or those who participated in ISL. The ISL participants scored higher in social responsibility. Students who did not participate in RSL or ISL scored higher in excellence.

There were several limitations in this study. First, the original plan was to assess pre and post ISL experience Core Values Self-Assessment scores for DPT students from a variety of entry-level DPT programs that offered ISL. Unfortunately, due to COVID-19 occurring in the spring of 2020, international travel was suspended nationally. This limitation meant that none of the DPT students were able to participate in ISL. Second, the single cohort of students that were identified as potential participants was from a program who had already offered one ISL trip in January 2020 and RSL in summer of 2019, which some of the cohort members had attended. A third of the class had not been able to participate in an ISL experience due to COVID-19 leading to the cancellation of their trips. Using a single cohort of students resulted in a small population (N=53). Third, due to students being from one cohort and from a single entry-level DPT program in the United States, results of this study have limited application to other students attending different DPT programs and ISL experience.

Conclusions

      Although the results of this study were not statistically significant, some interesting trends were noted. This study assessed the potential difference in APTA Core Values Self-Assessment tool total score and sub-section scores of students enrolled in a single cohort of a DPT program. The group population represented students who did not participate in SL, those who participated in regional service-learning, and those who participated in international service-learning.

      Of the 53 students in the identified population, 23 participated (43.4% response rate). Eight participants had not participated in a SL experience. Seven participants had participated in RSL. Eight students had participated in ISL. Each of the three sub-groups of students based on SL experience were represented.

      When assessing results from the American Physical Therapy Association's Core Values Self- Assessment, each participant's total core value score was calculated. Participants' scores on each of the 7 sub-sections were also calculated. These scores were compared by group as defined by SL experience. The research questions investigated were based on the total core value and 7 sub-section scores by group. The question was whether there would be a difference in scores on the APTA Core Values Self-Assessment between students who did not participate in a SL trip, those who attended RSL, and those who attended ISL.

      The hypothesis that the students who participated in ISL would have the highest Core Value Self-Assessment total score was not supported by the findings of this study. The hypotheses regarding students who participated in ISL scoring the highest on the individual core value assessments were not supported either, except for H_8. The hypothesis regarding the social responsibility core value, H_8, was supported. The ISL group scored highest on this core value of the three groups assessed. This finding is interesting as it was expected that the ISL experience would help DPT students develop professional behaviors. It is unclear if the score difference between the three groups is due to natural personal beliefs of the involved students, or if their SL experiences influenced their responses.

      Previous research had found indications that SL participation helped develop professional behaviors, including cultural competence and appreciation for professionalism, core values, and interprofessional collaboration (Hayward et al., 2017). Further research had found that students believed that their SL experiences reinforced their decisions to pursue PT as a future profession (Collins et al., 2019; Danzl et al., 2019). This current study did not find statistically significant differences between the groups based on SL experience in their Core Values Self-Assessment scores. Part of this lack of difference could be due to the students all electing to attend a DPT program that offered SL as an integral part of the curriculum. Program selection before entering into a DPT program could have begun the shaping of the DPT student professional behaviors and beliefs. Further, the participants from the single cohort shared the same professional preparation to the point of assessment throughout their curriculum, including participation in local service-learning and interprofessional experiences. The group of the participants who did not get to attend a SL experience were slated to attend an ISL but were not able to due to COVID-19 travel restrictions. It is possible that the ISL and no SL groups scored similarly due to commonalities in goals and desire to

participate in ISL before attending. These participants may have developed similar professional behaviors and core values before the SL that impacted them more than the experience may have.

Although the results of this study were not statistically significantly, it is possible for SL experiences to impact DPT student professional behavior development. One question raised is whether the experience of service-learning in any of the assessed settings (local, regional, or international) makes a similar impact on student professional behaviors? Could the idea of providing service and helping a community in need help develop core values regardless of setting? ISL did appear impact social responsibility, indicating these students had come to appreciate this core value more due to their awareness of global health issues and the impact their experience had on the community partner.

Although previous research found that ISL facilitated the development of some core values, such as altruism, compassion/caring, integrity, and professional duty, the findings of this study did not have the same trend (Borstad et al., 2018; Reynolds, 2009). The higher scores of the RSL participant group may indicate that participation in RSL could be beneficial to DPT student professional development. Lack of statistical significance could have been related to the small population size. The results are not applicable to other DPT students in general due to the sample population being representative of only one program in the United States that offered SL within its curriculum. When assessing academic or professional benefits of SL participation, it is recommended based on the results of this research that the APTA Core Values Self-Assessment be used as a pre and post experience assessment in combination with written reflection.

Reflection is integral to SL because it allows students to process their individual experiences (Anderson et al., 2014). By combining student reflection with the APTA Core Values Self-Assessment and result in a more wholistic assessment of student professional development can be completed. The APTA Core Values Self-Assessment integrates self-reflection for the participant to submit his or her responses. The connection between academic and professional development with SL experience can help reinforce the implementation of SL experiences, both regional and international.

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