Designing an Educational Program to Promote Diversity and Student Engagement in Professional Advocacy (SEPA)

Jessica Alden
Howard University

Lynda Hill
Howard University

Felecia Moore Banks
Howard University

Ronan Connolly
National University of Ireland, Galway

Julius Ngwa
Howard University

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Abstract

Little is understood about best educational strategies to engage diverse occupational therapy students in professional advocacy. The purpose of this research was to use design-based research (DBR) methods to design a novel educational intervention to promote professional engagement of diverse students over three subsequent years. This study used a pre/post design to design, implement, evaluate, and revise an educational program entitled "Student Engagement in Professional Advocacy" (SEPA). This manuscript reports on the first year of that study. The participants (N=27) were entry-level Master of Science occupational therapy students. The outcome measure was a survey measuring student knowledge, attitude, and participation specific to professional advocacy. All participants completed the pre and post surveys and participated in four SEPA educational modules. Significant differences were observed in pre and post scores in knowledge ($p < 0.0001$), action ($p = 0.004$), and attitude ($p = 0.012$). This suggests that SEPA was effective at increasing student knowledge of, attitudes toward, and participation in professional advocacy. Pearson correlation of domains revealed a strong positive association between knowledge and attitude ($p = 0.0003$), actions and attitude ($p = 0.0018$), and action and knowledge ($p = 0.0262$). This indicates that educational programs promoting professional engagement should address knowledge and attitudes and provide opportunities for participation. Qualitative data provided additional information on how students integrated professional engagement into their identity as students, and practical feedback on how to improve the program. Study findings supported the use of SEPA to promote student professional engagement. Further research is indicated, including conducting additional iterations of the project to continue to refine SEPA.

Keywords

Occupational therapy, advocacy, diversity, disparities

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Jessica Alden, OTD, MA, OT/L[1]; Lynda Hill, OTD, OTR/L[1];

Felecia Moore Banks, Ph.D., MEd, OTR/L, FAOTA[1];

Ronan Connolly, B.Ed, MA[2]; and Julius S. Ngwa, Ph.D[1]

Howard University[1], United States[1]

National University of Ireland, Galway[2], Ireland[2]

ABSTRACT

Little is understood about best educational strategies to engage diverse occupational therapy students in professional advocacy. The purpose of this research was to use design-based research (DBR) methods to design a novel educational intervention to promote professional engagement of diverse students over three subsequent years. This study used a pre/post design to design, implement, evaluate, and revise an educational program entitled "Student Engagement in Professional Advocacy" (SEPA). This manuscript reports on the first year of that study. The participants (N=27) were entry-level Master of Science occupational therapy students. The outcome measure was a survey measuring student knowledge, attitude, and participation specific to professional advocacy. All participants completed the pre and post surveys and participated in four SEPA educational modules. Significant differences were observed in pre and post scores in knowledge ($p < 0.0001$), action ($p= 0.004$), and attitude ($p=0.012$). This suggests that SEPA was effective at increasing student knowledge of, attitudes toward, and participation in professional advocacy. Pearson correlation of domains revealed a strong positive association between knowledge and attitude ($p= 0.0003$), actions and attitude ($p = 0.0018$), and action and knowledge ($p=0.0262$). This indicates that educational programs promoting professional engagement should address knowledge and attitudes and provide opportunities for participation. Qualitative data provided additional information on how students integrated professional engagement into their identity as students, and practical feedback on how to improve the program. Study findings supported the use of SEPA to promote student professional engagement. Further research is indicated, including conducting additional iterations of the project to continue to refine SEPA.

Background

Occupational therapists have the potential to promote health by actively engaging in the policy making process at the local, state, and national levels. Although client and professional advocacy are established parts of occupational therapy curricula nationally by the Accreditation Council for Occupational Therapy Education (ACOTE, 2018), there is little information on the best way to deliver this content to students, and how to measure the outcomes of learning activities designed to engage students politically. Furthermore, there is no existing evidence on how to specifically engage minority students in professional advocacy within occupational therapy. In order to promote the profile and unique value of occupational therapy, and to increase the profession's impact within the larger allied healthcare system, it is imperative to identify effective strategies to engage diverse students and clinicians to participate in professional advocacy. The American Occupational Therapy Association's (AOTA, 2017) Vision 2025 charges occupational therapists to be intentionally inclusive of diversity and to promote equity for all persons. In order to achieve this aim, it is critical to promote engagement of occupational therapy students from diverse backgrounds to engage in professional advocacy and leadership roles in order to promote health equity.

Laws and regulations at both the state and national level impact all types of healthcare service delivery. Consequently, all healthcare providers (HCPs), including OTs, have a professional responsibility to engage in professional advocacy in order to influence policy-makers to shape the laws that regulate their practice. In order for OTs to engage in professional advocacy, they must demonstrate proficiency in a variety of advocacy skills, and also believe in the value of advocacy. Specific to occupational therapy, professional advocacy may include being emotionally connected with the profession of occupational therapy and being physically involved as an occupational therapist (Kahn, 1990). Examples of professional advocacy include but are not limited to: membership in a state association, sending a letter to your state representative through the AOTA's legislative action center, and networking at the national conference. Although advocating for individual clients is an essential skill for OTs, it was not within the scope of this research project.

Historically, HCPs have been successful in shaping legislative regulations that impact healthcare at the individual and population health levels. However, a unique challenge that occupational therapists face is that the profession is relatively small. Labor statistics suggest that occupational therapists and occupational therapy assistants make up less than 2% of HCPs nationally (Bureau of Labor Statistics, 2017). Due to the relatively few number of occupational therapists compared to larger professions such as nursing, there is an increased urgency for occupational therapists to participate in advocacy in order to ensure that laws reflect the unique scope of practice of occupational therapy. It is difficult to quantify the extent of individual occupational therapy participation in professional advocacy. Membership in voluntary professional organizations (VPOs) may be used as one indicator of participation in professional advocacy. AOTA is the national organization that represents approximately 213,000 occupational therapy students and practitioners. AOTA membership is currently around 65,000 (AOTA, 2021), indicating that fewer than 50% of occupational therapy practitioners choose to become members

of the national organization. However, membership in professional organizations is just one measure of participation in professional advocacy and more clinicians may engage in professional advocacy through other means.

Despite indications that there may be a need to increase occupational therapy participation in professional advocacy, there is a paucity of information describing how and why occupational therapists engage in professional advocacy. Research that has been conducted with nurses may provide some insights into what underpins HCPs' political participation behaviors. Research has revealed that the motivation and political skillset of individual nurses are critical to promoting participation in professional advocacy. Not only must a person be driven to affect policy change, he/she must also possess the skills necessary to affect change. Research on motivation with nurses identified family influences, role models, exposure to political involvement through formal education or professional groups (Deschaine & Schaffer, 2003; Gebbie et al., 2000; Winter & Lockhart, 1997), linkage to advocacy networks and political efficacy (Oden et al., 2000; Wilson, 2002) as factors that promote participation in professional politics. Several specific political skills were identified as necessary to impact the policy making process: 1) awareness of health policy issues, 2) understanding of legislative and policy process, 3) political knowledge such as knowing who makes policy decisions and how to contact them, 4) involvement in the political process (including voting), and 5) participating in professional groups (Byrd et al., 2012; Primomo, 2007). Several barriers to political advocacy have also been identified: heavy workload, lack of knowledge of legislative processes, lack of awareness of advocacy resources, time constraints and lack of professional socialization opportunities with advocates and policy makers (Cramer, 2002; Gosselin-Acomb et al., 2007; Oden et al., 2000; Winter & Lockhart, 1997). Research has also shown that despite the steady improvements in the overall health of the United States, healthcare inequities persist. Racial and ethnic minorities experience poorer health outcomes in a variety of areas, not limited to: infant mortality, obesity, heart disease, and AIDS diagnosis and mortality (National Academies of Science, Engineering, Medicine, 2017). These disparities in healthcare exist even when controlling for gender, condition, age and socio-economic status. By 2050, it is projected that more than 50% of the United States population will identify as a minority (Sharma et al., 2016). It is critical that students are aware of these disparities and are empowered to advocate for policy change. It is also essential to engage more students of diverse backgrounds in advocacy.

As many similarities exist between nursing and occupational therapy professional advocacy, it was assumed by the researchers in this study that the skills and circumstances that promote and prohibit participation in professional advocacy by nurses would be similar with occupational therapists. In addition, research has shown that race and ethnicity impact how persons from different racial and ethnic groups participate in civic engagement (Jones, 2016). The researchers in this study aimed to design and implement an educational intervention that engaged university students from diverse racial and ethnic backgrounds, and from diverse geographic locations in order to serve the student population at their university.

Educating occupational therapy students on professional advocacy while still at university can increase the likelihood of professional participation after they graduate. Although educating students on advocacy and leadership are difficult skills to teach (Pace & Flowers, 2012), research within the nursing profession has suggested that educating students on policy during their training can effectively motivate students to participate in the political process (Primomo, 2007). Research within the field of occupational therapy has shown that faculty are instrumental in promoting professionalization and participation in organizations such as AOTA (Holm et al., 2020). With the expansion of occupational therapy programs nationally, and the unique position of the researchers as faculty, it was decided to tackle the problem of professional advocacy at the student and curriculum level.

Prior to conducting the current project, the authors conducted an informal pilot project with a cohort of students in 2016. The pilot included one lecture on two topics specific to professional advocacy: membership in professional organizations and use of the legislative action center on AOTA.org. A short questionnaire was also shared with students to solicit anonymous feedback on the program. Responses were informally reviewed by the authors. The findings suggested that students found the information useful and meaningful to their studies as an occupational therapy student. The students suggested using role models and activities more specific to their unique situation for future activities. Due to positive feedback received on the pilot lecture, the authors decided to design a more comprehensive educational program using a design-based research (DBR) framework.

Design-based research has become an increasingly popular design method to assess the efficacy of educational interventions such as instructional approaches, application of technology, assessment types, and use of learning activities (Zheng, 2015) with a specific group of learners in a natural learning environment. Design-based research involves active collaboration between researchers and educators as they work together to design and implement a novel learning program (Design Based Research Collective, 2013) to address a learning problem. After identifying the learning problem, the researchers design a potential educational solution using existing literature and develop a conjecture map to outline the trajectory of the learning program in each design cycle. The conjecture map also serves as an outline to provide researchers with a systematic approach to explain how functions interact to produce the intended outcomes (Barab et al., 2008; Gravemeijer & Cobb, 2006; Sandoval & Bell, 2004). Lastly, the researchers use an iterative process of repeated cycles of design, implement, evaluate, and revise (Sumbramamian et al., 2015) to refine and improve the educational solution based on student response.

The purpose of this research project was to design, implement, evaluate, and revise an educational program to engage a diverse occupational therapy student group in professional advocacy. The Student Engagement in Professional Advocacy (SEPA) educational program was designed to promote professional and political participation of a diverse group of occupational therapy students. The authors intended to review and refine SEPA by administering three iterations of the project over three subsequent

academic years. This paper reports on the first iteration of the SEPA program. The following objectives were established for the first year of the study:

1. Identify if SEPA provided effective learning activities that increase students' knowledge and skills necessary to engage in professional advocacy.
2. Examine the effectiveness of SEPA on students' beliefs and level of participation in professional advocacy.
3. Describe how SEPA impacted students' inclusion of professional advocacy as part of their professional identity.
4. Identify areas to improve the program for future iterations.

The overarching research questions for the long-term project were:

1. Does SEPA provide learning activities that increase student knowledge and skills necessary to engage in professional advocacy?
2. In what way does SEPA positively effect student attitudes towards participation in professional advocacy and what types of advocacy do they participate in after participating in SEPA?
3. How can SEPA be improved for future iterations to better promote student participation in professional advocacy?

Method

Research Design
This study used a DBR method to trial a novel educational program (SEPA). A single subject pre-post survey design was used to assess the efficacy of the SEPA program over one cycle. For this project, the researchers served as educators and also collaborated with other faculty in development and delivery of the educational intervention. The pre-survey, titled "Professional Advocacy Pre-Test (PAPT1), was administered, and then the educational program (SEPA) was embedded in core coursework and delivered to students, followed by administration of the post-survey, titled "Professional Advocacy Post-Test (PAPT2)". The pre and post surveys collected information on students' knowledge of how to engage politically, attitudes towards professional advocacy, and participation in professional advocacy using Likert scales before and after participating in SEPA. Open-ended questions were included in the post-survey to collect student feedback on how the program could be improved, and how they felt that participating in the program impacted their sense of professional identity.

Based on Sandoval (2013), the DBR process in general, and the first cycle of SEPA, is characterized in Figure 1.
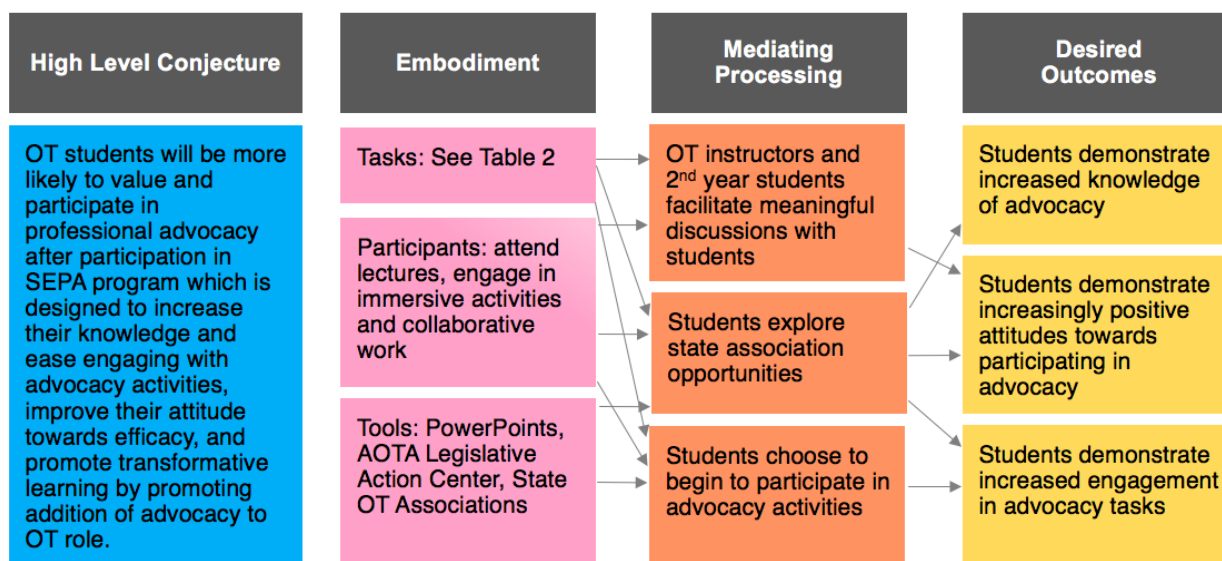
Figure 1

Design Based Research (DBR) Design and DBR Cycle 1 (SEPA)
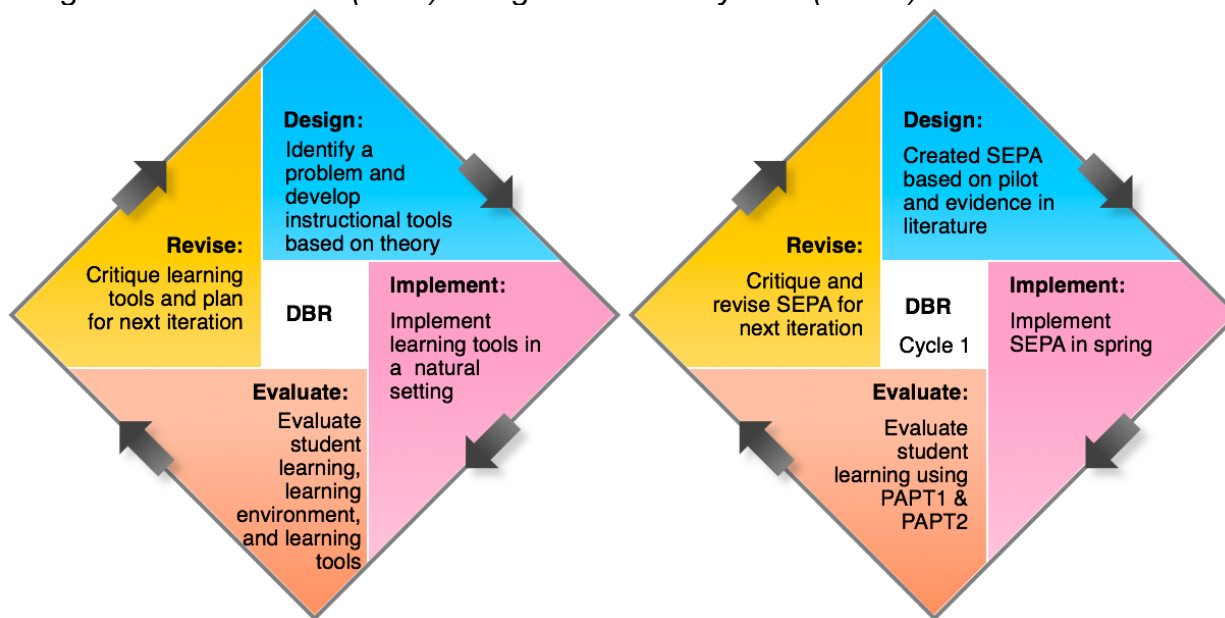
As is commonly used with DBR research, a conjecture map (see Figure 2) was developed by the authors to outline the trajectory of the SEPA in each design cycle, and to guide the researchers in a systematic approach to explain how SEPA impacted student learning.

Figure 2

Initial SEPA Conjecture Map

Participants

Purposive sampling was used to recruit first year occupational therapy students in an entry-level Master's program. All 30 students in the first-year graduate program were invited to participate in the study. Twenty-seven student participants completed the PAPT1 and PAPT2 surveys. All 27 participants completed the subscales on the PAPT1 and PAPT2 surveys, but not all participants responded to the open-ended questions. Participant demographics are summarized in Table 1.

Table 1

Participant Demographics

Characteristics	n (%)
Age	
20-25	21 (78%)
26-30	6 (22%)
Gender	
Male	3 (11%)
Female	24 (89%)
Race	
African American	20 (74%)
White	4 (15%)
Asian	2 (7%)
Did not disclose	1 (4%)

Note: N=27. Percentages may not be equal to 100 due to rounding.

Instruments

Qualitative and quantitative data collection methods were used to collect responses from students via questionnaire on the SurveyMonkey platform. The authors developed a "Professional Advocacy Pre-Test (PAPT1)" and a "Professional Advocacy Post-Test (PAPT2)" by modifying the statements on the "Political Astuteness Inventory (PAI)" and adding additional open-ended questions to collect students' perceptions on the program and how it impacted their sense of professional identity.

The PAI was chosen as a template for the assessment tool because it is a questionnaire designed to measure political astuteness. It was first published in a community nursing book in 1984 and has been used in a variety of disciplines including nursing (Byrd et al., 2012) and pharmacy (Pace & Flowers, 2012). The PAI is a forty-item survey that generally takes about ten minutes to complete. The content areas of the PAI include voting behavior, participation in professional or student organizations, knowledge of the legislative and policy process, knowledge of elected officials, involvement in the political process, and awareness of health policy issues (Byrd et al., 2012). Respondents are directed to answer "yes" or "no" to items assessing their political astuteness. Each item with a "yes" response is scored with one point and the total score is calculated by adding up the number of points scored. Based on the total score, four levels of political acuteness are recognized from "totally politically

unaware" (0-9 points) to "politically astute" (30-40 points). Primomo (2007) provided evidence of content validity of the PAI. Previous studies established internal consistency of the PAI to be 0.81 using Cronbach's α and 0.84 (Byrd et al., 2012) with nursing students.

Twenty-six statements from the PAI were selected for use in the pre and post surveys due to their pertinence to study objectives. Statements adopted from the PAI were modified to enhance their relevance to occupational therapy; samples of modifications are shown in Appendix 1. The statements measured self-perception of cognitive and affective learning: and were further divided into subscales of knowledge (cognitive), attitude (affective), and actions (affective). The knowledge subscale included statements that addressed topics such as understanding how to use the AOTA legislative action center or knowing how to contact an AOTA lobbyist. The attitude subscale collected information on students' feelings of efficacy with items such as "I believe that occupational therapy students may impact upon policy." Finally, the action subscale collected information about actions taken and used statements such as "I contribute financially to the American Occupational Therapy Foundation (AOTF)", and "I attended the most recent meeting of my state's association." The authors chose to alter the scoring system from a yes (1)/no (0) scoring system to a Likert type response using a five-point interval scale from strongly disagree (1) to strongly agree (5) in order to potentially increase sensitivity with higher scores suggesting a higher level of agreement. After the pilot project and before beginning cycle 1 the face validity of PAPT1 and PAPT2 were informally assessed with a small cohort of students. The content validity was informally assessed by expert review conducted by two faculty members and one member of the AOTA representative assembly (RA).

The "Professional Advocacy Post-test (PAPT2)" included the twenty-six Likert type statements and an additional six open-ended questions below to collect student feedback on the modules and to gain insight into whether the students had experienced transformative learning which impacted their sense of professional identity while participating in the project. These questions were informally assessed for face validity with a small cohort of students following the pilot study, and by expert review.

1. What do you think can be added or improved to these modules so that you are more interested and prepared to engage in occupational therapy professional advocacy?
2. How has this project impacted how you will engage in politics or with AOTA in the future? Please explain how it has impacted your attitudes and the actions you might take related to political and AOTA participation.
3. In your opinion, what was most and least meaningful and effective about this advocacy program?
4. In your opinion, what are two ways to motivate an OT student to continue to be active in professional advocacy events after graduation.
5. What do you believe is the role of the OT student to participate in professional advocacy events?
6. How do you think an OT student might participate, and do you think this is worthwhile?

SEPA Program

The four SEPA modules were developed by the faculty researchers and reviewed by faculty, clinical specialists, and the local representative to the RA for accuracy and relevance. In order to ensure the module's content was aligned with occupational therapy educational standards, the authors reviewed the *ACOTE Standards and Interpretive Guide* (ACOTE, 2018) and aligned the content with standards B.2.1, B.2.3., B.2.5., and B.3.4. These standards were already embedded in the courses in alignment with the program curriculum, but the SEPA project provided a novel instructional approach to address these standards and to measure learning outcomes. The authors also reviewed the mission and education philosophy of the Master's of Science Occupational Therapy (MSOT) program which focused on the program's commitment to serving diverse and underserved populations where access to quality healthcare has been restricted or denied. All learning activities were directed towards addressing health inequities.

The four modules were designed with the mission of the department in mind and were tailored to address the diverse backgrounds of the students. The researchers subsequently designed the four modules for SEPA with an emphasis on addressing health disparities and issues of inequity. Emphasis was placed on empowering students to advocate for equitable services for underrepresented groups, particularly the African American and Latino community. Emphasis was also placed on providing role models and learning experiences specific to the students' unique situation.

The content for SEPA modules were shaped by the existing literature on professional advocacy in HCPs, responses from the students, and information prepared by AOTA. Content for the modules (see Table 2) was also informed by Byrd's (2012) work on identifying skills necessary for nurses to participate in advocacy, and additional studies on nurses and advocacy by Warner (2003) and Woodward et al. (2016). Materials posted to the AOTA legislative action website provided materials for instruction and activities. In addition to aligning the modules with ACOTE standards, the modules were designed to seamlessly merge with the course objectives of the class in which they were embedded. Each module included 15 minutes of didactic lecture and 15 minutes of immersive learning activities, including a discussion facilitated by peer role models. The peer role models included second year students in the occupational therapy program. The peer role models received training from the researchers before participating in the sessions. The first and fourth modules took 10-15 minutes longer to deliver because the PAPT-1 and PAPT-2 were delivered during them.

Table 2

SEPA Educational Modules

Educational Modules (1-4)	Skill(s) Emphasized (Byrd, 2012)
Module 1 *Didactic:* • AOTA, AOTF*, AOTPAC*, AOTA Legislative Action Center • Lack of diversity in occupational therapy • How lack of diversity in HCPs perpetuates health inequities *Discussion:* • Why is it important for healthcare providers to look like the people they serve? • What are benefits to having more persons from diverse backgrounds in leadership roles? *Immersive Activity:* • Action Center (send an email to representative) using AOTA legislative action center	Awareness of health policy issues, understanding legislative and policy process, political knowledge, involvement in political process, participating in professional groups
Module 2 *Didactic*: • Legislation and working with older adults • Emphasis on Medicare Part B cap *Discussion*: • How does Medicare Part B cap influence access to care? *Immersive Activity*: • Sending an email to an elective official using the AOTA legislative action center	Awareness of health policy issues, understanding of legislative and policy process
Module 3 *Didactic*: • Legislative history and impact on pediatric practice	Awareness of health policy issues, understanding of legislative and policy process, historical legislative "victories in occupational therapy"

Module 3 Continued *Discussion*: • How do school-based services vary across the country? • Describe school-based occupational therapy in your hometown. *Immersive Activity*: • How can your advocacy help children receiving occupational therapy in underserved communities? • Identify local challenges to children in your community.	
Module 4 *Requests for Action*: • Working with your state association and state representative to initiate a motion ("request for action") *Discussion*: • How do you see yourself helping to drive change in occupational therapy five years after graduation? • What ideas would you share with your state representative to the Representative Assembly? *Immersive Activity*: • Locating state association website and exploring features.	Awareness of health policy issues, understanding legislative and policy process, political knowledge, involvement in political process, participating in professional groups

Note: American Occupational Therapy Foundation (AOTF), American Occupational Therapy Political Action Committee (AOTPAC)

Procedures

This study was approved by the university Institutional Review Board. All students completed consent prior to participation in the study.

The faculty researchers met with the course coordinators of the classes in which SEPA modules would be embedded in order to agree upon dates and times to deliver the four SEPA modules and to administer the PAPT-1 and PAPT-2 surveys. The four educational modules of SEPA modules were seamlessly embedded within relevant core curriculum courses during a nine-week period of the spring term with instructor input to

minimize disruption to coursework. Participation in the study was voluntary and did not impact students' grades in any courses. Instructors were not aware of which students participated or did not participate.

At the time that the first module was delivered in January of the students' spring term, all students enrolled in the first year of their graduate occupational therapy studies were invited to participate in the study. The purpose of the study was explained to them, and they were informed that participation in the study would not impact their grade in any class. Before delivering the first educational module, students were given 10-15 minutes of class time to complete the PAPT1 online using SurveyMonkey. The authors left the classroom while students completed the PAPT1, and students who chose not to participate in the PAPT1 were given the opportunity to read the questionnaire and/or work on their laptop. At no time were the authors or other faculty members aware of who elected to participate in the study. The authors then co-taught with faculty and second year students to deliver the four SEPA modules within four classes over the nine-week period. Module 1 was delivered in January, Modules 2 and 3 were delivered approximately two weeks apart in February, and Module 4 was delivered at the start of March. The faculty and the second-year students who delivered the SEPA educational modules were all female, but from a variety of ethnic backgrounds and geographic areas. The second-year students were instructed in the didactic content by the authors prior to delivering the content to the first-year students. The second-year students also practiced delivering the content and facilitating discussion. The authors served as guest lecturers to jointly deliver SEPA content in classes where the faculty member was not an author of the project. As advocacy standards were already part of the curriculum, all students participated in the SEPA learning modules, although some chose not to complete the surveys and participate in the study. After completion of the fourth module of SEPA, the authors left the classroom and students were given 15 minutes of class-time to complete the PAPT2. Students who chose not to participate in the study were given the same time to work on their laptops.

Data Analysis
Qualitative and quantitative data were collected in tandem, and then analyzed separately before being reviewed together to identify consistencies and differences. Descriptive statistics were used to compute mean and standard deviations of participant characteristics and to summarize responses on the PAPT1 and PAPT2. Paired sample t-tests were used to determine whether there was any statistical difference between Pre and Post responses on the PAPT1 and PAPT2 for responses to individual items. Further statistical analysis was conducted using Pearson correlation of domains to assess potential association between responses within the different domains of knowledge, attitude, and action. Descriptive and inferential statistics were performed using the Statistical Analysis System (SAS) (Statistical Analysis System, 2011) and p-values less than 0.05 were considered statistically significant.

Analysis and reduction of the open-ended responses began immediately after the PAPT2 was received. The authors first read the complete data set multiple times to achieve immersion and an understanding of the whole. They then used an informal,

systematic review of the open-ended responses to create codes from the data before identifying themes and returning again to the data to code responses line by line. Due to the relatively small amount of data, thematic content analysis software was not used. The authors created an Excel document to track coding of responses and organize responses into themes.

After the quantitative and qualitative data analyses were completed, the authors reviewed the results together to identify differences and commonalities in the results.

Results

Descriptive statistics were used to summarize the mean class response to each item and paired sample t-tests compared the PAPT1 and PAPT2 individual responses. These scores are summarized in Table 3. Results indicated that the program had a significant impact on both cognitive and affective learning. The students reported significantly more knowledge on 6 of 8 statements related to knowledge. The students reported a significant change in their attitude on 3 of 11 attitude statements. The students demonstrated a significant increase in participation in professional advocacy as indicated by a statistically significant increase in 5 of 7 statements.

Table 3

Comparison of Pre vs. Post Scores by Subscale Questions

Sub-scale	Characteristics	PAPT1 Mean (SD)	PAPT2 Mean (SD)	P
	Accessed AOTA legislative action center	2.26 (0.90)	3.09 (1.11)	**0.006**
	Contacted local representative	2.37 (0.93)	3.23 (1.27)	**0.005**
	Donated to AOTF	2.52 (1.01)	3.18 (1.22)	**0.048**
Actions	Member of AOTA or state OT association	3.04 (1.29)	3.91 (1.02)	**0.006**
	Attended state OT meeting	3.96 (1.13)	3.95 (1.05)	0.527
	Acted in an OT advocacy role	2.41 (1.12)	2.77 (1.23)	**0.021**
	Attended OT conference or meeting	2.89 (0.97)	3.23 (1.19)	0.119

Sub-Scale	Characteristics	PAPT1 Mean (SD)	PAPT2 Mean (SD)	P
Attitudes	AOTPAC can affect public policy	2.81 (1.08)	3.36 (1.00)	0.116
	AOTA leadership can affect public policy	3.52 (1.09)	3.91 (0.92)	0.215
	AOTA members can affect policy	3.23 (1.18)	3.50 (1.06)	0.261
	AOTA affects professional policy	3.23 (0.95)	3.18 (1.01)	1.000
	AOTA membership is important	3.67 (1.04)	3.59 (1.01)	0.360
	OTs can affect professional policy	3.22 (0.97)	3.68 (0.78)	0.076
	OT students can affect policy	2.50 (0.95)	3.14 (0.94)	**0.009**
	OT can affect public policy	2.11 (0.75)	2.91 (1.06)	**0.008**
	State Assoc. membership is important	2.27 (0.87)	3.27 (1.08)	**<.0001**
	State OT association can affect policy	3.33 (1.04)	3.55 (0.91)	0.205
	AOTA is focusing on important issues	3.96 (0.85)	3.95 (0.84)	0.667
Knowledge	AOTA's position on policies	1.85 (0.77)	3.14 (0.89)	**<.0001**
	How to contact AOTA lobbyist	1.93 (1.04)	3.45 (0.96)	**0.001**
	Health policies reg. OT under discussion	2.52 (0.85)	2.73 (0.77)	0.137
	How to contact my local elected official	1.56 (0.70)	3.00 (0.93)	**<.0001**
	How to request action with AOTA	1.48 (0.75)	2.86 (0.89)	**<.0001**
	How to contact local representative to RA	1.85 (0.95)	3.45 (0.86)	**0.0002**
	Current AOTA legislative priorities	2.22 (0.80)	2.59 (0.91)	0.137
	State association functions	1.89 (0.97)	3.50 (0.80)	**<.0001**

Cumulative scores were calculated for each subscale and compared for the pre and post scores within the subscale (see Table 4). The researchers observed significant differences in pre and post scores in all three subscales of knowledge, action, and attitude. The most significant change in scores before and after participating in SEPA was in the knowledge area (p < 0.0001). Significant differences in scores were also noted in the subscales of action (p= 0.004) and attitude (p=0.012).

Table 4

Comparison of Pre vs. Post Scores by Subscale

Subscale	Pre-score	Post-scores	Paired Difference	Test-Stats	P-Values
Action	19.44 (5.09)	23.16(6.08)	-3.58(4.73)	-3.30	**0.004**
Attitude	34.30(6.30)	38.04(7.80)	-5.82 (8.46)	-2.84	**0.012**
Knowledge	15.30(4.79)	24.73(5.14)	-9.00(5.20)	-7.55	**<.0001**

Pearson correlation of domains (see Table 5) revealed a strong positive association between knowledge and attitude (p= 0.0003), actions and attitude (p = 0.0018), and action and knowledge (p=0.0262).

Table 5

Pearson Correlation of Domains

Domain	Correlation	P-Value
Action and Attitude	0.61387	**0.0018**
Attitude and Knowledge	0.69169	**0.0003**
Knowledge and Action	0.42726	**0.0262**

Open-ended responses provided valuable information on students' perspectives of the program and gave valuable insight into their perceptions of the role of the occupational therapy student as an advocate.

SEPA Impact Within the Cognitive Domain of Acquiring Knowledge and Skills to Engage in Professional Advocacy
Both the statistical analysis of the change between PAPT1 and PAPT2 scores and the open-ended question responses indicated that the students had expanded their knowledge and skillset to engage in professional advocacy. One student stated, "I thought everything about the information was helpful. I had no clue how to get engaged in advocacy before."

The overall change between pre and post scores on the knowledge subscale was significant (p<0.0001). Comparison of student scores demonstrated statistically significant differences on 5 of 8 statements related to knowledge between pre and post-test. Students reported significant increases in knowledge on items addressing

knowledge of the occupational therapy state association, health policy issues being discussed in Congress, initiating a motion with the AOTA Representative Assembly, improvement in knowledge of AOTA lobbyist role, and knowledge of how to contact local representative.

Open-ended responses on the PAPT2 revealed three general content areas that the students found most useful for learning the skills necessary for professional advocacy. First, 10 out of 15 students identified that learning to use the AOTA legislative action center was the most helpful learning activity. Students also found learning about laws and bills and learning about how to access information to be the most useful. Student responses indicated which material they found most useful with statements such as: "Step by step instructions on where to find the information," and "learning about different sources used to find information advocacy," and " I found all the information helpful as I am not currently aware of any major legislative actions or policies."

SEPA Impact Within the Affective Domains of Attitudes Towards Participating in Professional Advocacy and Taking Action to Participate in Professional Advocacy

Differences between PAPT1 and PAPT2 scores demonstrated significant increases in overall scores on both the attitude ($p=0.012$) and action ($p=0.004$) subscales. Participants demonstrated statistically significant differences in their attitude towards professional advocacy on 3 of 7 statements; showing a significantly more positive attitude towards professional advocacy specific to students being able to impact policy change ($p=0.009$), being able to affect professional policy ($p=0.0008$), and a more positive attitude towards state associations ($p=0.0001$). Students demonstrated a significant change in their participation in professional advocacy as indicated by a statistically significant increase in 5 of 7 statements. Between pre and post-test there was a statistically significant change in both using the AOTA legislative action center and joining the state association of ($p=0.006$). Students also demonstrated a significant increase in contributions to AOTPAC, contacting their local representative, and pursuing leadership positions.

Impact of Program on Students' Inclusion of Professional Advocacy as Part of Their Professional Identity

Fourteen participants indicated they felt that there was a role for occupational therapy students in professional advocacy. Students indicated that they felt it was worthwhile for students to participate in professional advocacy events such as attending conference and volunteering, joining the state association, and contacting their elected representatives. One student stated, "I believe that students play a vital role in participating in professional advocacy events. Students are the future of the field and therefore they should be knowledgeable and active in events that impact their field." Another student stated that, "The role of the OT student is to get involved in their state. I think an OT student can get involved by volunteering."

Student Feedback on How to Improve or Revise the Program

Students were asked to provide feedback on how the SEPA program could be improved upon completion of the PAPT2. The feedback was generally positive, and ten students responded to this question, with five stating the program was fine as it was. The other six students provided suggestions to increase "advocacy and/or interaction," "a video to show things that have been done or a timeline showing events," model "more activities to promote OT," and "step-by-step activities for students who are attending school out of state."

Discussion

Analysis of the data revealed several factors that facilitated diverse students' participation in professional advocacy and also provided useful information to revise SEPA before its second iteration.

The SEPA program was effective at impacting the students in both the cognitive and affective domains of learning, and also appeared to have an impact on their identity. The intervention had the most impact on their knowledge, which is not surprising as these were first year students who had little previous knowledge about occupational therapy advocacy, and because the project was led by experienced educators. SEPA also positively impacted their attitude towards professional advocacy. Students demonstrated a strong interest in learning how they could be effective advocates for the profession. The most statistically significant change in attitude occurred in the attitude of the student group towards the value of the state association. While completing the activity involving exploring the state association, students stated they were most interested in joining their state association to network for job opportunities, and to find mentors. This suggests that the use of "real world" activities which are personally meaningful to the students, and role modeling is an important attribute to this process. Notably, the students reported a significant improvement in attitude towards students' ability to impact policy and towards state membership. Statistical analysis revealed a strong correlation between knowledge and attitude scores, suggesting that students' knowledge of advocacy history and the potential for impact was related to their attitudes towards engaging in professional advocacy. During the modules, the students had opportunities to engage in activities such as contacting a local representative. Immersive and authentic activities such as this may have a greater impact on their attitude towards the potential impact that students may have on diverse and underrepresented communities rather than activities learning about actions AOTA has taken. One student said, "OT students are the constituents who express our thoughts to the representative. We are the voice behind the concerns." However, despite not changing some of their attitudes towards participating in specific advocacy events, their responses indicated that they had found participating in the program to be a transformative experience. The students were able to identify a variety of ways to participate in professional advocacy as a student and articulated that they felt that participating in professional advocacy was an important part of advocating for equitable healthcare and access to occupational therapy services for underrepresented groups.

The SEPA program was very successful in providing students with the knowledge and skillset to engage in advocacy. Referring back to Byrd's (2012) research to establish a critical skillset for nurses to engage in advocacy, it is evident that the students who completed SEPA possessed the essential skills to engage in advocacy. Of the five skills, the students demonstrated improved skills in all five areas of: 1) awareness of health policy issues, particularly as they relate to underrepresented communities; 2) understanding of legislative and policy process; 3) political knowledge such as knowing who makes policy decisions and how to contact them; 4) involvement in the political process; and 5) participating in professional groups. It can be inferred that going forward, the students have the skills necessary to participate in professional advocacy at the local and national levels if they are motivated to do so. The students reported finding this information useful, but also provided some helpful feedback on how to make the information more user-friendly. Future iterations of this project will make adjustments accordingly.

The SEPA program was successful in increasing student participation in professional advocacy, and open-ended responses indicated that students valued the opportunity to participate in a variety of advocacy events. Some of the participation in advocacy activities was part of the SEPA program (e.g. using AOTA legislative action center to contact a local representative). However, several students independently chose to join their state association or donate to AOTPAC after participating in the program. For local students, they were able to join the state association for just $5.00, which may be a contributing factor to many choosing to join. Research in Canada has shown that membership fees greatly impact clinician's decisions about whether to join VPOs such as state associations (Reyes & Brown, 2018). It is unlikely that the student would have donated to AOTPAC or joined their state association without participating in SEPA and there is potential that the student may continue to support their state association and AOTPAC. Although all the reasons for students joining VPOs were not known, the study did indicate a positive correlation between knowledge and attitude and action. After participating in SEPA, students may have been more likely to consider supporting professional advocacy as one reason to join a VPO. Another recent study with occupational therapy students demonstrated that only 26.3% of student respondents on their survey identified professional advocacy as their first reason for membership in AOTA (Holm et al., 2020). It is important to teach students about the role of VPOs in professional advocacy for them to understand that one of the functions of these organizations is to advocate for occupational therapy clinicians and clients. This knowledge may have a positive impact on their decisions to join and/or support VPOs.

Summary of Cycle 1 Findings
- Students wanted to learn information relevant to their background (cultural, values) and specific to their state of residence.
- Students felt that there was a role for occupational therapy students in advocacy.
- Students valued resources they could use to support advocacy activities, particularly for underrepresented groups.

- Students were interested in leadership roles.
- Students enjoyed contacting their representative through the legislative action center.
- Students were interested in participating in advocacy.

Implications for the Next Iteration of the Project
Based on the results of cycle 1, the authors felt the project was successful, but needed the following modifications:
- Create legislative action timeline (e.g. IDEA, Med B Cap).
- Create a hands-on activity with real advocacy opportunity for each module.
- Discuss leadership roles that would be available.

Limitations
There were several limitations related to this study's design and methods. Researchers used a purposive sample of only 27 student participants which may limit the generalizability of the findings due to the small sample size. While the male-female distribution of the study participants was representative of the national average for occupational therapists, with 89% of practicing clinicians identifying as female (Harvison, 2015), the sample was more diverse than the composition of most entry-level occupational therapy student cohorts nationally which may also impact the generalizability. Design limitations include using a single-subject pre/post design with participants' baselines serving as their own control rather than use of a distinct control group. Additionally, the survey tool used for the pre/post assessment was not standardized.

Implications for Occupational Therapy Education
The findings from this study suggest that an advocacy program embedded in the core occupational therapy curriculum has a positive impact on students' knowledge of advocacy, attitudes towards participation in advocacy, and ultimately in their participation in advocacy. There is a lack of diversity in occupational therapy practitioners and within the leadership roles of AOTA. In order to address healthcare inequities, it is critical to engage students and clinicians from diverse backgrounds in professional advocacy and leadership roles. It is incumbent upon faculty to create a culture and develop instructional activities that empower students from diverse backgrounds to engage in professional advocacy.

This research demonstrates the importance of delivering advocacy education to occupational therapy students while still at university. Incorporating advocacy into coursework with activities that are hands-on and are personally meaningful promote diverse student participation in advocacy. This research shows that students were quickly able to learn fundamental skills for advocacy, but that the activities presented to engage students in advocacy must be personally meaningful and relevant to students' home communities.

To develop a program to promote diverse student engagement in professional advocacy the following suggestions/ recommendations are offered:

- Design a sequential program for educating students on advocacy skills.
- Create guides that make it easy to engage in advocacy through the AOTA legislative action center.
- In addition to faculty, involve senior students in teaching educational modules to provide relatable role-models.
- Address advocacy related issues that impact persons of minority background.
- Integrate discussion points that are inclusive of diverse students, are personally meaningful to the students, and which touch on health inequities.
- Demonstrate the value of advocacy and outline how it has shaped the profession with a timeline of advocacy victories and how they shaped the work OTs do.
- Create real-world activities that allow students to engage in authentic advocacy activities that are personally meaningful.
- Create discussion opportunities to discuss how advocacy can impact student careers and the communities they intend to serve after graduation.

Delivering advocacy education in a manner to effectively engage diverse students is not only important in efforts to neutralize healthcare disparities, but also to empower the increasing numbers of occupational therapy students from diverse backgrounds to participate in advocacy and potentially assume leadership roles. While there is a shortage of practitioners from minority backgrounds in occupational therapy, there is evidence that more students from diverse backgrounds are enrolling in occupational therapy programs. A 2019 workforce survey conducted by AOTA revealed that occupational therapists are predominantly white (84%) and female (91%; AOTA, 2020). However, the same workforce report suggested that occupational therapy students may be becoming more racially, ethnically, and culturally diverse. While the gender make-up of students remains predominantly female (90%) and similar to the profile of practitioners, the make-up of students is more diverse. According to the 2019 workforce survey, only 74% of students identified as white, while 6.5% identified as African American/ Black, 9.2% identified as Asian/Pacific Islander, and 5.9% identified as Hispanic/Latino. As SEPA was developed and trialed with a diverse student cohort, it provides valuable insights in to promoting advocacy participation in diverse students in a time when the demographics of occupational therapy programs are slowly shifting to include more students of minority background.

Implications for Voluntary Professional Organizations
The results from this study suggests several strategies that VPOs may use to promote engagement of diverse students.

- Students demonstrated interest in VPOs for networking and job search opportunities. Highlighting these opportunities may help to increase membership of new graduates.

- Students also demonstrated an interest in mentorship and there is potential for increased student participation in state and national organizations through mentorship programs.
- Students did not know the role of VPOS in terms of advocacy. VPOs might highlight their role in promoting health equity to promote engagement of students from diverse backgrounds.

Future Research

Based on the strength of the results, further study in this area is indicated. Completion of the proposed three-year cycle of SEPA development is indicated based on the promising results from the first iteration. Future studies should include larger sample sizes and be conducted at a variety of geographic locations nationally, with students from diverse backgrounds. Larger sample sizes would improve the power of statistical analysis and could provide important information to improve the delivery and efficacy of SEPA and inform educational interventions designed to promote student professional advocacy. SEPA could become an educational tool to promote faculty's ability to facilitate participation in professional advocacy during studies, which may also lead to increased participation in advocacy post-graduation. Additional research studying the potential long-term impacts of this educational intervention on students once they are practicing would provide useful long-term results on participation in professional advocacy of occupational therapy practitioners at one year, five years and ten years post-graduation.

Conclusion

This study contributes to the growing body of literature on how to promote participation in professional advocacy by healthcare professionals. The results of the study are very promising and suggest that the SEPA program was successful in achieving all its objectives. The modified PAPT2 and open-ended responses indicated that students felt that their knowledge of how to engage in professional advocacy was improved. It is useful to note that students felt that hands-on, immersive learning experiences were most beneficial. After completing SEPA, students were able to identify a variety of paths to participate in professional advocacy, including donation to AOTF, contacting legislative representatives, requesting an action with the AOTA Representative Assembly, participating in AOTA Hill Day, and engaging with the legislative action center. Students' responses indicated that participating in the program has been a transformative experience. Students stated that they understood their role as participants in professional advocacy and were able to identify how their participation may be impactful. More specifically, students learned the value and importance of being present to advocate for equitable services for underrepresented groups, particularly the African American and Latino community. This may lead to increased clinician involvement in professional advocacy over time. The results further suggest that incorporating real world experiences, hands-on learning, and role modeling are the most effective teaching interventions to engage diverse students in professional advocacy. Students benefit more from engaging in immersive advocacy learning experiences than pure didactic instruction on advocacy. The authors of this study intend to administer the SEPA educational program with larger student cohorts so that it may be refined further

to become more effective and also to enhance its generalizability to larger groups. It is significant that OTs become motivated and empowered to engage in professional advocacy for the profession to thrive. The students who participated in this project were from a range of diverse backgrounds. That the program was impactful with diverse students shows promise for increasing the participation of diverse HCPs in policy making. The involvement of diverse HCPs in policy decision making is critical to addressing the diverse needs of underrepresented populations and to neutralize healthcare inequities.

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Appendix 1

Sample of Questionnaire Statements Modified from Original PAI

Statement used for study	Original Statement in PAI (if modified)	Subscale/Domain
I attended the most recent meeting of my state's association	I attended the most recent meeting of my district's nursing association	Action/Affective
I am aware of at least two issues discussed and the stands taken by AOTA	I am aware of at least two issues discussed and the stands taken at this state conference	Knowledge/Cognitive
I know how to contact the lobbyists at AOTA	I know how to contact these lobbyists	Knowledge/Cognitive