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Learning Outcomes, Attitudes, and Experiences of Occupational Therapy Students in Service-Learning: A Mixed-Methods Study

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Research Article

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Abstract

Background: Service-learning has emerged as an effective pedagogical strategy in health professions education, promoting academic development, civic engagement, and professional growth. However, evidence of its impact on occupational therapy (OT) students remains limited.

Objective: This study aimed to investigate the learning outcomes, attitudes, and experiences of OT students who participated in a service-learning program.

Methods: A mixed-methods design was employed. Pre- and post-program surveys (n=31) using the Service-Learning Outcomes Measurement Scale-Short Version were used to assess competency-based outcomes. After program completion, a survey was conducted to assess the students' understanding of service-learning and its perceived relevance to OT education. Focus group interviews were subsequently conducted and thematically analyzed to further explore their perspectives.

Results: Quantitative analyses revealed significant improvements with moderate effect sizes in knowledge application, personal and professional skills, and self-awareness. Although changes in civic orientation and engagement were non-significant, small-to-moderate effect sizes were observed. Post-program surveys indicated positive perceptions of service-learning, with students acknowledging its relevance to OT education and its role in integrating theoretical knowledge with real-world practice. Qualitative analysis identified three overarching themes: enhanced learning outcomes, personal growth and transformation, and strengthened professional identity.

Conclusion: Service-learning positively contributes to academic development, personal growth, and the formation of professional identity among OT students. These findings underscore the importance of integrating service-learning into OT curricula to promote holistic student growth and professional preparedness.

Introduction

In contemporary health professions education, there is growing recognition that cultivating technical competence alone is insufficient to prepare future practitioners for the complexities of modern healthcare systems.[1] Educators now emphasize the development of interpersonal skills, ethical reasoning, civic responsibility, and professional identity as essential components of comprehensive professional development.[2,3] To address these evolving educational needs, service-learning has emerged as an innovative and impactful pedagogical approach that integrates academic content with meaningful community engagement.[4]

Service-learning is a structured educational experience in which students engage in organized service activities addressing community-identified needs, combined with guided reflection that promotes academic learning and personal growth.[5] Unlike traditional classroom learning, service-learning emphasizes experiential, student-centered education that situates learning within authentic social

contexts. This approach enhances empathy, critical thinking, cultural competence, and social awareness among students across health-related disciplines.[6,7]

In occupational therapy (OT) education, service-learning is particularly relevant because it aligns with the profession's core principles of occupational justice, holistic care, and client-centered practice. Engaging with underserved populations in real-world settings allows OT students to deepen their understanding of the social determinants of health, develop professional communication skills, and address ethical and practical challenges that extend beyond textbook scenarios.[8–10] Such experiences often foster personal reflection, value clarification, and identity formation, all of which are integral to becoming competent and compassionate occupational therapists.[11–13]

Despite the theoretical alignment and growing advocacy for service-learning in OT curricula, empirical evidence of its impact remains limited, particularly in non-Western and culturally diverse contexts. Most existing studies have relied on quantitative methods or focused primarily on academic performance and skill acquisition.[14] However, beyond quantitative research, exploring students' subjective perspectives on how they interpret, internalize, and transform their service-learning experiences remains essential. Understanding students' narratives of learning and growth is crucial for assessing the actual educational value of service-learning and optimizing its integration into health professions education.[15] This study addressed this gap by employing both qualitative and quantitative methods to examine the perceived learning outcomes, personal growth, and professional development of OT students who participated in a structured service-learning program. Through an in-depth analysis of student reflections alongside a quantitative evaluation of academic competencies and skill acquisition, this study aimed to elucidate how service-learning fosters professional identity formation and prepares students to navigate the interpersonal and ethical complexities of clinical practice. Focusing on Korean OT students, it offers a context-specific perspective that contributes to a broader understanding of how service-learning supports student development across diverse educational and cultural settings.

Method

Participants

Participants were third-year OT students enrolled in the *Community-Based Occupational Therapy* course at Jeonju University in the Jeolla region of Korea. The course includes a structured service-learning program spanning two academic semesters. A total of 31 students participated in the study during the first semester of 2025, all without prior service-learning experience. Although service-learning activities were course requirements, only students who voluntarily consented were included in the pre- and post-surveys and focus-group interviews. Focus group participants were selected through purposive sampling based on two criteria: (a) enrollment in and completion of the service-learning course during the study period, and (b) voluntary agreement to participate in the discussions. Students who did not consent or missed major program activities were excluded to ensure that participants had direct, relevant experiences to provide meaningful insights into the program's learning outcomes. Written informed

consent was obtained from all participants prior to data collection. The study protocol was reviewed and approved by the Institutional Review Board of Jeonju University (No. jjIRB-2024-1005).

Service-learning procedure

The structured service-learning program was integrated into the *Community-Based Occupational Therapy* course over one academic semester. The program was implemented in four sequential phases: preparation, action, reflection, and evaluation and feedback. Figure 1 outlines the components and details of the service-learning approach used in this study.

Outcome measures

Quantitative and qualitative methods were employed to assess students' perceptions, attitudes, and competency-based outcomes related to the service-learning course. A self-developed questionnaire assessed the students' understanding of service-learning, its perceived relevance to OT education, and their attitudes toward community engagement. Questionnaire items were developed based on a review of relevant literature and core components of service-learning in OT education.[16,17] To ensure content validity, faculty experts reviewed the draft questionnaire, and a pilot test was conducted with a small group of students to confirm its clarity and relevance.

A validated short version of the Service-Learning Outcomes Measurement Scale (S-LOMS-SV) was used to measure competency-based learning outcomes. It comprises 21 items across four domains: knowledge application, personal and professional skills, civic orientation and engagement, and self-awareness. The S-LOMS-SV has demonstrated content and construct validity and high internal consistency in a previous study[18] and was adapted to align with the core competencies emphasized in OT education. The scale was administered before and after the program to examine changes in student outcomes over time.

To gain an in-depth understanding of students' subjective experiences, semi-structured guiding questions were developed for the focus group interviews. The interview guide was developed based on a literature review of service-learning in OT education. It explored themes such as perceived learning outcomes, challenges encountered during the program, personal growth, and professional identity formation. By integrating quantitative and qualitative approaches, this study comprehensively captured the educational and experiential impacts of the service-learning program. Table 1 presents the semi-structured interview guide developed for the focus group discussions.

Data analysis

All quantitative data were analyzed using SPSS version 15.0 (IBM Corp., Armonk, NY, USA). Descriptive statistics, including means, standard deviations, and frequencies, were used to summarize the participant characteristics. Changes in outcomes measured using the S-LOMS-SV were examined using paired sample *t*-tests, with statistical significance set at $p<.05$. Perceptions and attitudes toward service-

learning were analyzed using means, standard deviations, and positive response rates (%), calculated as the proportion of students who selected “agree” or “strongly agree” for each item.

Qualitative data from the focus group interviews were analyzed using a constant comparative method.[19] Two researchers independently reviewed and coded transcripts, using open coding to identify initial themes. Codes were discussed until consensus was reached, after which categories were developed and axial coding was applied to identify overarching themes and subthemes. Selective coding was then used to refine the analysis and capture key learning outcomes, personal and professional growth, and perceived challenges during the service-learning program. The criteria of truth value, applicability, consistency, and neutrality proposed by Lincoln and Guba[20] were applied to ensure the trustworthiness of the qualitative data. Participants’ statements were recorded verbatim and independently analyzed by two researchers to maintain truth value. Applicability was confirmed through consultations with two OT professors experienced in qualitative research who were not involved in the study. Consistency was enhanced through regular meetings among the authors to compare analyses and discuss alternative interpretations. To ensure neutrality, the researchers adopted an “epoche” approach to minimize the influence of personal bias on data interpretation.

Results

Participant characteristics

A total of 31 students participated in this study, comprising 13 men (41.9%) and 18 women (58.1%), with a mean age of 21.61±1.45 years.

Changes in service-learning outcomes

Significant improvements and moderate effect sizes were observed in the domains of knowledge application (pre: 6.13±1.97; post: 7.25±1.63; p=.011, Cohen’s d=0.56), personal and professional skills (pre: 6.38±1.85; post: 7.24±1.68; p=.047, d=0.47), and self-awareness (pre: 7.17±1.65; post: 8.16±1.62; p=.037, d=0.45). Although the improvement in civic orientation and engagement was not significant (p=.175), the mean score increased from 7.66±1.54 to 8.21±1.38, with a small-to-moderate effect size (d=0.40) (Table 2, Figure 2).

Perceptions and attitudes toward the service-learning course

Post-program survey revealed that participants generally expressed high levels of agreement regarding their perceptions of and attitudes toward the service-learning course (Table 3). Among the perception-related items, the highest positive response rates (100%) were observed for “Class content was linked to actual service activities” and “I felt a sense of responsibility as a community member.” Similarly, items such as “The content of the course is related to my major” and “Classroom learning was connected with field experience” also demonstrated high positive response rates (95.9%). Regarding attitudes toward service-learning, students strongly agreed that the program effectively connected academic learning

with real-world experiences (positive response: 95.9%) and enhanced their interpersonal skills as future professionals (95.8%). However, the item “My ability to collaborate has improved” received a relatively lower positive response rate (66.7%).

Qualitative findings

Thematic analysis of the focus group interviews identified three primary categories: (1) perceived learning outcomes from service-learning, (2) perceived personal growth and transformation, and (3) influence on professional outlook and career identity (Figure 3).

Perceived Learning Outcomes from Service-Learning

Participants described applying academic knowledge in real-world contexts and developing practical clinical skills. The “application of academic knowledge” theme involved the transfer of classroom learning to field experiences and a deeper understanding of OT. For example, one participant stated, *“It was meaningful to apply what I had learned in class directly to clients.”* The “development of practical skills” theme encompassed acquiring clinical competencies, implementing intervention plans, and learning client interaction. Students also reported experiences related to “client-centered approaches” such as tailoring interventions to clients’ needs and recognizing the therapeutic value of meaningful activities. Additional themes included “emotional engagement,” which involves building rapport with clients; “adaptive problem-solving,” characterized by managing unexpected situations; and “teamwork and program design,” reflecting collaborative goal setting and planning with peers (Table 4).

Perceived Personal Growth and Transformation

Participants described various dimensions of personal development during the program. The theme “growth in flexibility and adaptability” captured students’ increased ability to respond to changing circumstances. One student remarked, *“I used to panic when things deviated from plans, but I became more flexible.”* The “enhanced collaboration and communication” theme reflected experiences of working together to plan and implement interventions. Students also highlighted “development of professional attitudes,” including greater respect and empathy for clients, and recognizing the importance of client autonomy. Themes related to “value clarification and ethical sensitivity” comprised increased awareness of social justice issues and evolving perceptions toward people with disabilities. Additionally, participants described “increased self-efficacy” and “empathy and human understanding,” reporting improvements in confidence and the ability to understand clients within their broader life contexts (Table 5).

Influence on Professional Outlook and Career Identity

Students discussed how service-learning shaped their perspectives on future professional roles. The “clarification of OT roles in the community” theme reflected an enhanced understanding of OT functions and scope in community settings. The “strengthening of career commitment” theme involved affirming OT as a career choice and an increased awareness of its societal impact. Under “future applications of

learned skills," participants expressed intentions to incorporate their experiences into clinical practice, particularly in program development and intervention planning. Additional themes included "development of professional vision," reflecting students' ability to envision themselves as competent practitioners, and "recognition of social responsibility," highlighting their awareness of a therapist's role in promoting client well-being through therapeutic programs (Table 6).

Discussion

This study examined the impact of a service-learning course on OT students' learning outcomes, personal development, and professional identity. Integrated analysis of both quantitative and qualitative data revealed that service-learning experiences significantly enhance students' academic progress, personal growth, and the development of professional competencies.

Enhancement of academic and practical competencies

The quantitative results demonstrated significant improvements in knowledge application, personal and professional skills, and self-awareness, with moderate effect sizes (Cohen's d = 0.45–0.56), indicating significant contributions to participants' learning outcomes. These findings align with prior research, suggesting that service-learning enhances students' ability to translate theoretical knowledge into practice.[21–23] Improvements in self-awareness and professional skills align with the findings of Bogo,[24] who emphasized the importance of reflective practice in professional identity formation among healthcare students. Qualitative findings corroborated the quantitative results, highlighting the development of clinical competencies, such as assessment and intervention planning, and client-centered care, which are considered core components of OT education and practice.[25] Furthermore, students' reflections indicated that the course effectively integrated academic knowledge with real-world engagement, exemplifying the principles of experiential and transformative learning.[21,26] This alignment between classroom instruction and community-based practice reinforces the pedagogical value of service-learning in preparing OT students for diverse and dynamic clinical environments.[27,28]

Development of personal and interpersonal skills

The service-learning program significantly fostered students' personal and interpersonal development, particularly in flexibility, empathy, collaboration, and ethical sensitivity. The participants reported an enhanced ability to adapt to unexpected situations, greater respect for clients' lived experiences, and an increased awareness of social justice issues. These findings align with existing literature indicating that service-learning enhances civic responsibility, empathy, interpersonal communication, and ethical reasoning.[15,29] Additionally, students' reflections indicated growth in perspective-taking and recognition of systemic inequities, which are essential humanistic competencies in OT practice.[30–32] These insights demonstrate how experiential learning settings can promote critical engagement with social contexts and professional values. Although the quantitative measures of civic orientation and engagement did not reach statistical significance, the observed small-to-moderate effect size (Cohen's d = 0.40) suggests

that the program significantly influenced students' attitudes. This finding is consistent with previous studies suggesting that service-learning can foster attitudinal and value-based development even when measurable changes are modest.[21] These results indicate that the program facilitated the development of professional identity rooted in humanistic values and social awareness, which are increasingly recognized as essential for effective, client-centered OT practice.

Influence on career identity and professional vision

The service-learning experience significantly enhanced the students' professional identity formation and vision for their future careers. Students reported gaining insight into the broader role of occupational therapists in community settings and reaffirmed their commitment to the profession. These findings align with scoping reviews and mixed-method studies, highlighting that practice-based pedagogies, such as service-learning, are critical for developing professional identity and intelligence in OT students.[33] Furthermore, reflections on applying acquired skills and envisioning themselves as competent practitioners suggest that the program contributed to immediate skill acquisition and long-term professional growth. This finding aligns with prior research showing that immersive learning experiences promote identity formation and readiness for professional roles.[34]

Educational and curricular implications

The findings of this study strongly support integrating structured service-learning into the OT curriculum. By bridging academic content with community-based practice, service-learning enhances students' clinical reasoning, ethical awareness, and social responsibility, which are core competencies in client-centered OT.[31,33] High levels of student agreement on the course's relevance and its connection to field experience underscore the educational value of such programs. These findings align with recent literature showing that service-learning fosters professional identity formation, civic awareness, and reflective thinking among OT students.[12,35] Given the growing emphasis on experiential learning and occupational justice in health profession education, incorporating service-learning as a pedagogical strategy may better prepare students for the complex demands of community-based practice.[31,36]

Limitations and future directions

Despite the encouraging outcomes, this study has a few limitations. First, the sample size was relatively small and drawn exclusively from a single institution, limiting the generalizability of the findings to broader populations or other educational contexts. Future research should involve larger, more diverse samples across multiple institutions to enhance external validity. Second, the reliance on self-report instruments and the voluntary nature of participation may have introduced response bias, including social desirability and selection bias. Future studies should consider incorporating mixed-method approaches, including observational assessments, peer evaluations, and instructor-rated performance measures, to triangulate the data and improve objectivity. Third, this study assessed only short-term outcomes. Therefore, longitudinal research is needed to examine the lasting effects of service-learning on students' professional competencies, civic engagement, and workforce integration after graduation.

Finally, although positive outcomes were observed across several domains, collaboration and civic engagement showed relatively modest improvements. To strengthen these specific domains, further investigations should explore pedagogical strategies or curricular enhancements, such as interprofessional education modules, structured reflection, and mentorship opportunities.

Conclusion

This study provides evidence of the educational value of service-learning within OT programs. By integrating academic content with real-world community engagement, service-learning fosters cognitive development, personal growth, and professional identity formation. Participants reported enhanced understanding of course materials, increased empathy, improved communication skills, and a clearer vision of their roles as future occupational therapists. These findings highlight the potential of service-learning as a transformative pedagogical tool aligned with the holistic and client-centered values of OT. Therefore, integrating service-learning into health professions education may serve as an effective strategy to prepare socially responsive and competent practitioners capable of addressing the complex needs of diverse populations.

Declarations

Data Sharing Statement

All data generated or analyzed during this study are included within this article. Further inquiries can be directed to the corresponding author.

Ethics Approval and Consent to Participate

This study was approved by the Ethics Committee of Jeonju University and conducted in accordance with the Declaration of Helsinki. Written informed consent was obtained from all participants prior to their inclusion in the study.

Author Contributions

All authors contributed to data analysis, drafting or revising the manuscript, gave final approval of the version to be published, agreed to the submitted journal, and take responsibility for all aspects of the work.

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The authors declare no conflicts of interest in this work.

References

1. Benner P. Educating nurses: a call for radical transformation-how far have we come?. J Nurs Educ. 2012;51(4):183-184. https://doi.org/10.3928/01484834-20120402-01
2. Fitzgerald HE, Bruns K, Sonka ST, Furco A, Swanson L. The centrality of engagement in higher education: reflections and future directions. *J Higher Educ Outreach Engagem.* 2016;20(1):245-253.
3. Tijsma G, Hilverda F, Scheffelaar A, et al. Becoming productive 21st century citizens: a systematic review uncovering design principles for integrating community service learning into higher education courses. *Educ Res.* 2020;62(4):390-413. https://doi.org/10.1080/00131881.2020.1836987
4. Stewart T, Wubbena Z. An overview of infusing service-learning in medical education. Int J Med Educ. 2014;5:147-156. https://doi.org/10.5116/ijme.53ae.c907
5. Bringle RG, Hatcher JA. A service-learning curriculum for faculty. *Mich J Community Serv Learn.* 1995;2(1):112-122.
6. Schmidt NA, Brown JM. Service Learning in Undergraduate Nursing Education: Strategies to Facilitate Meaningful Reflection. *J Prof Nurs.* 2016;32(2):100-106. https://doi.org/10.1016/j.profnurs.2015.06.006
7. Chen HC, McAdams-Jones D, Tay DL, Packer JM. The impact of service–learning on students' cultural competence. *Teach Learn Nurs.* 2012;7(2):67-73. https://doi.org/10.1016/j.teln.2011.11.002
8. Hansen AM, Muñoz J, Crist PA, et al. Service learning: meaningful, community-centered professional skill development for occupational therapy students. Occup Ther Health Care. 2007;21(1-2):25-49. https://doi.org/10.1080/J003v21n01_03
9. Maloney SM, Myers C, Bazyk J. The influence of a community-based service-learning experience on the development of occupational therapy students' feelings of civic responsibility. *Occup Ther Ment Health.* 2014;30(2):144-161. https://doi.org/10.1080/0164212X.2014.910160
10. Mroz TM, Pitonyak JS, Fogelberg D, Leland NE. Client Centeredness and Health Reform: Key Issues for Occupational Therapy. Am J Occup Ther. 2015;69(5):6905090010p1-6905090010p8. https://doi.org/10.5014/ajot.2015.695001
11. Lahav O, Daniely N, Yalon-Chamovitz S. Interpersonal social responsibility model of service learning: A longitudinal study. Scand J Occup Ther. 2018;25(1):61-69. https://doi.org/10.1080/11038128.2017.1335775
12. Tal-Saban M, Zaguri-Vittenberg S, Weintraub N. Enhancing professional identity of first-year occupational therapy students with the community-academia student tutoring program. Br J Occup Ther. 2024;87(2):106-113. https://doi.org/10.1177/03080226231198341
13. Bazyk S, Glorioso M, Gordon R, Haines J, Percaciante M. Service learning: the process of doing and becoming an occupational therapist. Occup Ther Health Care. 2010;24(2):171-187. https://doi.org/10.3109/07380571003681194
14. Wang Y, Chung LH, Cheng CY, et al. Predictors of academic and fieldwork performance in occupational therapy students: A systematic review. *Occup Ther Int.* 2023;2023:7281505. https://doi.org/10.1155/2023/7281505.

15. Jacoby B. *Service-learning essentials: Questions, answers, and lessons learned.* San Francisco: Jossey-Bass; 2015.
16. Andonian L. Occupational therapy students' self-efficacy, experience of supervision, and perception of meaningfulness of Level II fieldwork. *Open J Occup Ther.* 2017;5(2):Article 7. https://doi.org/10.15453/2168-6408.1220.
17. Mattila A, DeLuliis ED, Cook AB. Increasing self-efficacy through role emerging placements: Implications for occupational therapy experiential learning. *J Occup Ther Educ.* 2018;2(3). https://doi.org/10.26681/jote.2018.020303
18. Lau KH, Lam L, Snell RS, Ma CH-K. The development of the Service-Learning Outcomes Measurement Scale—Short Version (S-LOMS-SV) and its preliminary validation. *Int J Res Serv-Learn Community Engagem.* 2024;12(1). https://doi.org/10.37333/001c.125347.
19. Glaser BG, Strauss AL. The constant comparative method of qualitative analysis. *Soc Probl.* 1965;12(4):436-445.
20. Lincoln YS, Guba EG. *Naturalistic Inquiry.* Thousand Oaks (CA): SAGE; 1985.
21. Eyler J, Giles DE. *Where's the learning in service-learning?* San Francisco: Jossey-Bass; 1999.
22. Hunt R. Service-learning: an eye-opening experience that provokes emotion and challenges stereotypes. J Nurs Educ. 2007;46(6):277-281. https://doi.org/10.3928/01484834-20070601-07
23. Coker JS, Heiser E, Taylor L, Book C. Impacts of experiential learning depth and breadth on student outcomes. *J Exper Educ.* 2017;40(1):5-23. https://doi.org/10.1177/1053825916678265
24. Bogo M. *Achieving competence in social work through field education.* Toronto: University of Toronto Press; 2010.
25. Thomas Y, Penman M. WFOT standard for 1000 hours of practice placement: Informed by tradition or evidence? *Br J Occup Ther.* 2018;82(1):3-4. https://doi.org/10.1177/0308022618788785.
26. Mezirow J. Transformative Learning: Theory to Practice. *New Dir Adult Cont Educ.* 1997;(74):5-12. https://doi.org/10.1002/ace.7401
27. Anderson KL, Pierce ME, McNamara KM. NUMB3Rs revisited: Long-term impacts of reimagining service learning. J Exper Educ. 2022;45(1):51-67. https://doi.org/10.1177/1053825920973692
28. Jones D, McAllister L, Lyle D. Interprofessional academic service-learning in rural Australia: Exploring the impact on allied health student knowledge, skills, and practice. A qualitative study. Int J Pract-Based Learn Health Soc Care. 2015;3(2):1-16. https://doi.org/10.18552/ijpblhsc.v3i2.217
29. Simons L, Cleary B. The influence of service learning on students' personal and social development. *Coll Teach.* 2006;54(4):307-319. https://doi.org/10.3200/CTCH.54.4.307-319
30. Hansen AM. Bridging theory and practice: occupational justice and service learning. Work. 2013;45(1):41-58. https://doi.org/10.3233/WOR-131597
31. Wisniewski PA. Community–Based Learning: Transformative Change in OT Students' Awareness of Occupational Justice & Community Health. *Am J Occup Ther.* 2024;78(Suppl 2):7811500064p1. https://doi.org/10.5014/ajot.2024.78S2-PO64

32. Lim SM, Tan BL, Lim HB, Goh ZAG. Engaging persons with disabilities as community teachers for experiential learning in occupational therapy education. *Hong Kong J Occup Ther.* 2018;31(1):36-45. https://doi.org/10.1177/1569186118783877
33. Souto-Gómez A-I, Talavera-Valverde M-Á, Márquez-Álvarez L-J, García-de-la-Torre M-d-P. Analysis of Occupational Therapy Students' Pedagogical Practices for the Forging of Professional Identity and Development of Professional Intelligence: A Scoping Review. *J Intell.* 2023;11(3):48. https://doi.org/10.3390/jintelligence11030048
34. Gray H, Colthorpe K, Ernst H, Ainscough L. Professional identity of undergraduate occupational therapy students. *J Occup Ther Educ.* 2020;4(1). https://doi.org/10.26681/jote.2020.040102
35. Potvin MC, Morales AN, West EK, Kalimi M, Coviello JM. Occupational therapy students' perceptions of their experience in a role-emerging Level II fieldwork within higher education student services. BMC Med Educ. 2024;24(1):384. https://doi.org/10.1186/s12909-024-05303-7
36. Valdes K, Rider J, Leach C, Manalang KC. The impact of service-learning on occupational therapy doctoral students. *J Serv-Learn High Educ.* 2023;17:3-15.

Tables

Table 1. Areas and questions for group interviews

Learning Outcomes
1. What achievements did you gain from the community service experience?
2. Can you describe a session that went particularly well?
3. Were there any confusing or challenging moments during the program?
4. How was your interaction with the clients?
Personal Change and Growth
1. Did you make any decisions or modify sessions during the program? How did you feel, and what were your thoughts?
2. Please describe your experiences collaborating and discussing with team members to plan and implement the program.
3. How did the community service experience influence your goals, values, attitudes, or beliefs?
Professional Change and Growth
1. How will this community service experience affect your future professional practice?

Table 2. Pre-post changes in service-learning outcomes (S-LOMS-SV).

Domain	Pre (M±SD)	Post (M±SD)	*t*	*df*	*p*	Cohen's *d*
Knowledge application	6.13±1.97	7.25±1.63	-2.758	23	.011	0.56
Personal & professional skills	6.38±1.85	7.24±1.68	-2.081	23	.047	0.47
Civic orientation & engagement	7.66 ±1.54	8.21±1.38	-1.398	23	.175	0.40
Self-awareness	7.17±1.65	8.16±1.62	-2.210	23	.037	0.45

Table 3. Perceptions and attitudes toward service-learning (post)

Perception of the service-learning course	M±SD	Positive response rate (%)
The course content is related to my major.	4.63±0.57	95.9
Class content was linked to actual service activities.	4.58±0.50	100
It made me reflect on community issues.	4.54±0.65	91.7
Activities helped me understand the course objectives.	4.42±0.58	95.8
The course improved my ability to solve real-world problems.	4.58±0.65	91.7
Classroom learning was connected with field experience.	4.63±0.57	95.9
I felt a sense of responsibility as a community member.	4.61±0.49	100
I considered the roles and values of community.	4.46±0.58	95.8
Attitudes Toward Service Learning	M±SD	Positive response rate (%)
I became more aware of the surrounding social issues.	4.38±0.71	87.5
Service-learning connects academic learning with real-world experience.	4.50±0.59	95.9
My ability to collaborate has improved.	4.17±0.91	66.7
I became more open to diverse opinions.	4.38±0.64	91.6
Service learning is necessary in university education.	4.25±0.67	87.5
I think it can be applied to other courses in the future.	4.58±0.50	100
It helped me develop interpersonal skills needed as a professional.	4.46±0.58	95.8

Table 4. Perceived learning outcomes of the service-learning experience

Theme	Subtheme	Representative Quotes
1. Application of Academic Knowledge	- Applying textbook knowledge in real-world settings	“It was meaningful to apply what I had learned in class directly to clients.” (Student 5)
	- Better understanding of occupational therapy	“I achieved a deeper understanding of my major and gained practical capabilities.” (Student 6)
2. Development of Practical Skills	- Acquiring clinical competencies and field skills	“I was able to experience actual clinical skills and how to interact with real clients.” (Student 1)
	- Planning and executing interventions	“I acquired skills in planning and implementing programs, and adjusting interventions based on post-evaluation.” (Student 10)
3. Client-Centered Approach	- Adapting activities to client needs and functional levels	“I learned how to grade activities according to clients’ abilities.” (Student 4)
	- Understanding the therapeutic effects of meaningful activities	“I recognized the effects of handcraft activities for clients with impaired hand function.” (Student 4)
4. Emotional Engagement	- Building rapport and mutual sharing	“We shared our life stories, and by the end, we had formed a close relationship.” (Student 3)
	- Enhancing empathy and communication	“It helped me develop communication skills with clients.” (Student 6)
5. Adaptive Problem-Solving	- Managing unexpected or challenging situations	“When a client cried and left, I felt confused and did not know how to respond.” (Student 2)
	- Flexibility and responsiveness in real-time settings	“I had to quickly change the activity depending on each client’s interest and ability.” (Student 10)
6. Program Design and Teamwork	- Collaborating on intervention goals and methods	“We actively shared opinions in selecting activities tailored to the clients.” (Student 1)
	- Enhancing intervention planning skills	“I developed the ability to determine which program suits which client best and recognized the importance of feedback.” (Student 7)

Table 5. Perceived personal growth and transformation through service-learning

Theme	Subtheme	Representative Quotes
1. Growth in Flexibility and Adaptability	- Real-time decision-making and session adjustment	“When the activity ended early, we improvised and implemented another activity.” (Student 3)
	- Becoming less rigid and more solution-oriented	“I used to panic when things deviated from plan, but I became more flexible.” (Student 1)
2. Enhanced Collaboration and Communication	- Active discussion and shared decision-making among team members	“We constantly exchanged ideas and improved the program through group discussion.” (Student 9)
	- Negotiating program content and responsibilities	“Each session was planned collaboratively, and everyone contributed with ideas.” (Student 5)
3. Development of Professional Attitudes	- Embracing respect and empathy for clients	“I learned to approach people with disabilities without hesitation.” (Student 4)
	- Understanding the importance of client participation and autonomy	“I realized that supporting client participation is more important than providing help unconditionally.” (Student 5)
4. Value Clarification and Ethical Sensitivity	- Increased awareness of social justice and diversity	“It made me reflect on how to understand and support the socially vulnerable.” (Student 6)
	- Shifting perspectives toward people with disabilities	“I began to view people with disabilities not as different, but as individuals just like us.” (Student 9)
5. Increased Self-Efficacy and Confidence	- Gained confidence in clinical and leadership skills	“I developed confidence and courage to lead a program.” (Student 2)
	- Identifying personal strengths and areas for improvement	“I became aware of areas for improvement and strategies for managing unexpected challenges.” (Student 3)
6. Empathy and Human Understanding	- Recognizing the client’s life context	“To improve clients’ quality of life, therapeutic skill alone is not enough—understanding people is essential.” (Student 6)
	- The importance of rapport and client-centered interaction	“I realized the importance of rapport in enabling meaningful participation.” (Student 8)

Table 6. The influence of service-learning on occupational therapy students’ professional outlook and career identities

Theme	Subtheme	Representative Quotes
1. Clarification of OT Roles in the Community	- Understanding the scope and function of community-based OT	“I learned what occupational therapists actually do in the community setting.” (Student 1)
	- Increased interest in community-based practice	“Among various OT fields, I became more interested in the community area.” (Student 5)
2. Strengthening of Career Commitment	- Confirmation of OT as a future profession	“This experience helped me build confidence and confirmed my desire to become an occupational therapist.” (Student 6)
	- Awareness of the profession’s social impact	“It prompted me to reflect on the significance and importance of being an occupational therapist.” (Student 10)
3. Future Application of Learned Skills	- Applying service-learning experience to future clinical practice	“These experiences will help me in designing and delivering future clinical programs.” (Student 3)
	- Enhancing ability to design and evaluate interventions	“Through post-program evaluation, I realized how our intervention improved hand function, which made me appreciate the value of OT.” (Student 4)
4. Development of Professional Vision	- Envisioning oneself as a capable and strategic occupational therapist	“I want to become a therapist who is friendly but also takes the lead with well-planned programs.” (Student 2)
	- Self-reflection on potential strengths and specialization	“It prompted me to consider which area of OT would best suit me in the future.” (Student 10)
5. Recognition of Social Responsibility	- Helping clients live better lives through therapeutic programs	“As aging progresses, we can offer more diverse, targeted interventions to support better living for people with disabilities.” (Student 2)

Figures

	Key Component	Details
Preparation	**Clarification of Core Competencies**	Identifying essential skills and competencies required for community-based occupational therapy
	Preliminary Research & Analysis	Conducting literature reviews, analyzing previous service-learning reports, visiting relevant institutions, and performing interviews
	Orientation & Team Organization	Explaining the purpose of the service-learning activity, assigning responsibilities, establishing teams, and conducting team-building exercises
	Conducting Foundational Learning Activities	Learning about the client's medical conditions and specific needs Studying effective communication methods with individuals with disabilities Conducting pre-interviews and assessments to evaluate the client's current functional status and establish rapport
	Planning a Service Learning Program (Group OT Program)	Examples: Enhancing physical function through recreational activities Promoting hand function and emotional satisfaction and sense of accomplishment through therapeutic handicraft activities
Action	**Field Practice**	Providing OT services in collaboration with community organizations
	Collaboration and Communication	Strengthening collaboration and communication skills with institutions and clients
	Problem-Solving	Applying theoretical knowledge to real cases and addressing ethical dilemmas
	Continuous Documentation	Recording and analyzing activities through reports
Reflection	**Individual Reflection**	Using various methods of reflection such as journals and video diaries
	Group Discussion	Sharing experiences and providing mutual feedback with peers
	Values Clarification	Exploring personal values and professional identity
	Professional Development	Reflecting on the connection between learning and clinical professionalism
Evaluation and Feedback	**Outcome Evaluation**	Assessing knowledge, skills, and attitudes (including self- and peer-assessment)
	Institutional Evaluation	Incorporating feedback from institutions and clients
	Faculty Feedback	Identifying individual areas for improvement and future directions

Figure 1

Service-learning procedure

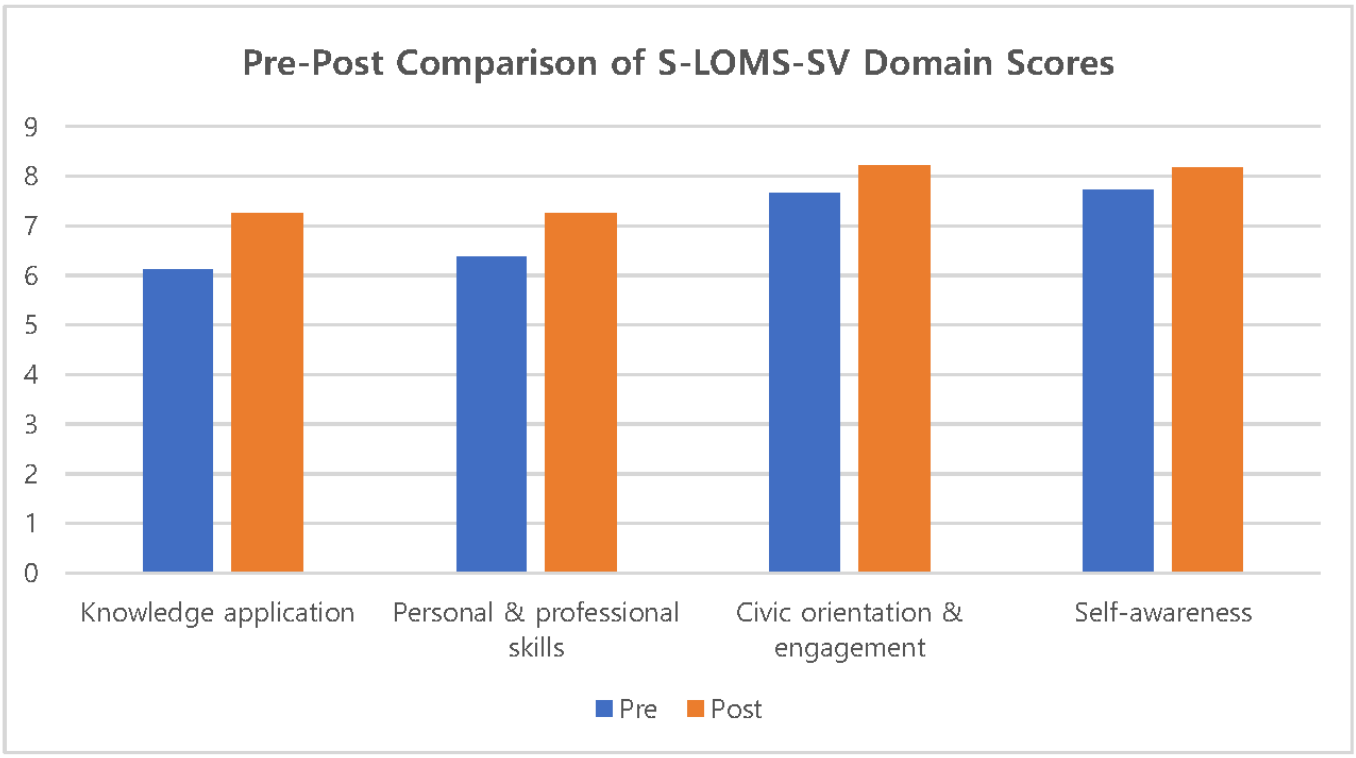


Figure 2

Pre-Post Comparison of S-LOMS-SV Domain Scores

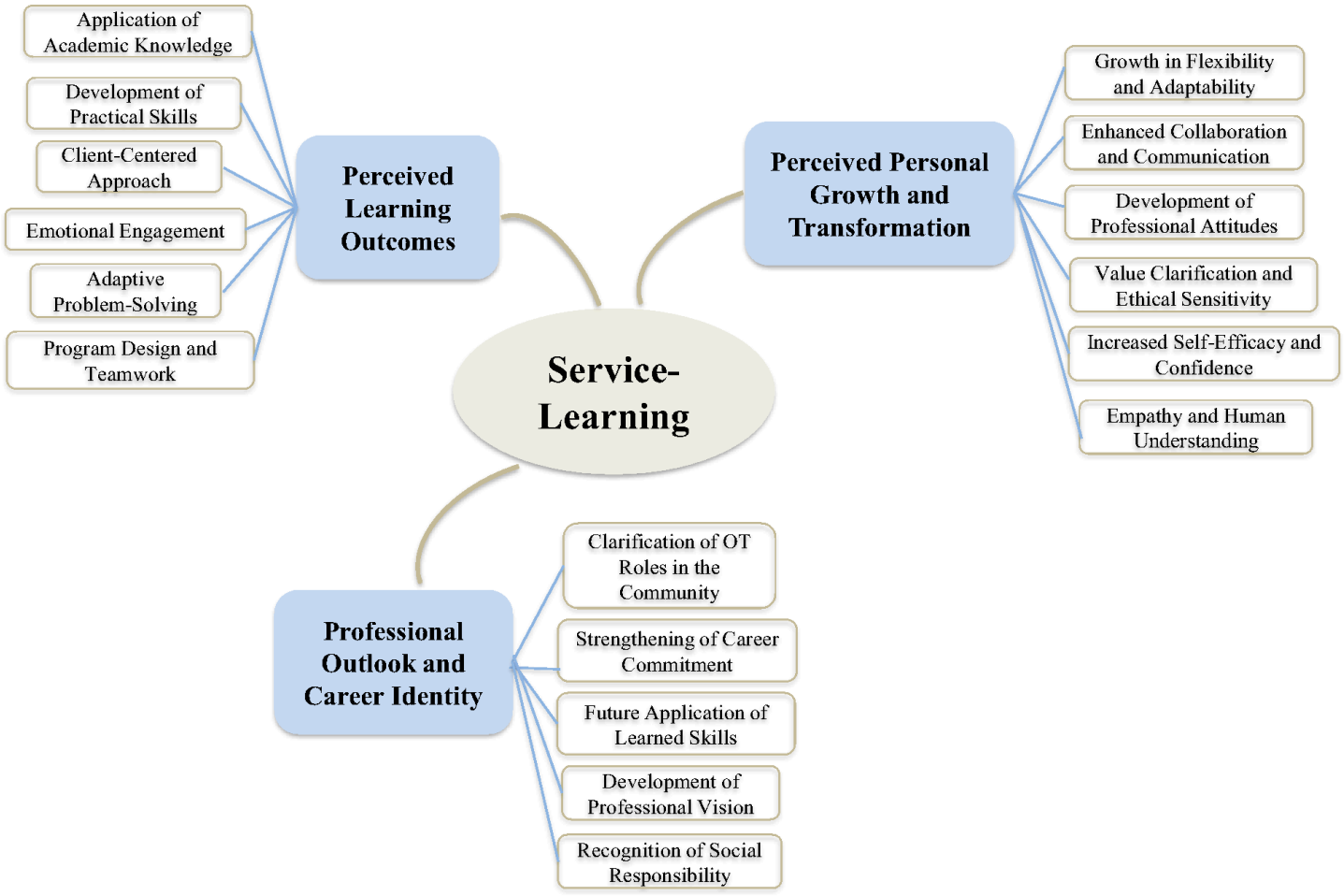


Figure 3

Perceived learning outcomes from service-learning