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Examining Occupational Therapy Students' Responses to Integrative Seminars

Abstract

The integrative seminar is an innovative teaching-learning approach that focuses on active learning and peer collaboration, characteristics that align with millennial learners' preferences. The use of integrative seminars has been reported by various health professions with positive outcomes. Course feedback survey data from the first cohort of occupational therapy students who participated in a new four-course integrative seminar series were analyzed. Findings suggest that the format of the courses was engaging for the learners. The students particularly valued the small class; the opportunities for peer collaboration; and the variety of active learning opportunities, including simulations. The students also indicated that the seminars helped them to integrate and apply their learning across the curriculum. In another survey completed near the end of their Level II fieldwork rotations, the students indicated that the seminars contributed to their readiness for fieldwork as well as to the development of their critical thinking, interpersonal skills, and professional identity. The findings from this analysis support the potential value of integrative seminars in occupational therapy education.

Comments

The authors report that they have no conflicts of interest to disclose.

Keywords

occupational therapy education, integrative seminars, millennial learners

Cover Page Footnote

The authors would like to thank the occupational therapy students at Samuel Merritt University for sharing their feedback and insights.

Credentials Display

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Occupational therapy education is continuously evolving in response to ever changing health care needs, the updated educational standards established by the Accreditation Council of Occupational Therapy Education (ACOTE), and the diverse learning styles of our students (American Occupational Therapy Association [AOTA], 2018). Current occupational therapy students are mostly millennials, born between 1982 and 2002 (Kotz, 2016). Millennial students grew up in an age of unprecedented rapid technological advancements; their learning styles are dramatically different from their faculty, who are mostly baby boomers (born between 1946 and 1964). These students are highly competent with technology, eager to multitask, and desire immediate answers to problems and questions (Kotz, 2016). Engaging millennial students in the learning process poses new challenges, including their short attention spans, quick access to massive amounts of information without proper evaluation of its quality (Daniel, 2013), expectations for “entertainment value inside the classroom” (Toothaker & Taliaferro, 2017, p. 347) and strong preference for experiential learning rather than traditional lectures (Smith & Foley, 2016).

Health professional education programs are currently still primarily comprised of content-focused lectures (Hills et al., 2017), which students often regard as disengaging (Toothaker & Taliaferro, 2017). Toothaker and Taliaferro (2017) found that during a course lecture, many nursing students partake in activities unrelated to the lecture, such as completing assignments from other courses or surfing social media. This student behavior is commonly observed in our occupational therapy classes as well. In addition, the risk of students regarding the course content as “learning material only for the test without retention and applicability to the clinical setting” (Toothaker & Taliaferro, 2017, p. 348) is noticeable among our student body.

The increasing prevalence of mental health concerns, particularly anxiety, among students in higher education, including graduate students, is noteworthy (Burton & Baxter, 2019; Jones et al., 2018). Concern about academic performance appears to be the greatest source of stress for college students (Jones et al., 2018). We have observed similar trends among our students in recent years, with stress and anxiety significantly impacting students' overall well-being and performance both in the academic setting and during fieldwork.

Integrative Seminars

In response to the learning needs of our students, we began incorporating integrative seminars into the occupational therapy curriculum at our university. The integrative seminar is a well-documented strategy in various professional education programs, including social work, nursing, medicine, and public administration (Fortune et al., 2018; Hickey et al., 2018; Roberti et al., 2017; Stout & Holmes, 2013). A seminar, as opposed to a traditional lecture, “is characterized by the active participation of a group of students in the discussion of a theme” (Roberti et al., 2017, p. 1). In this learning approach, seminars typically do not introduce new content but rather provide a dedicated context for students to integrate: to synthesize, deepen, and personalize their learning (Hickey et al., 2018). Integration occurs in multiple dimensions. Often, the purpose of integration is to connect didactic learning with clinical applications (Fortune et al., 2018; Roberti et al., 2017; Spira & Teigiser, 2010) or to synthesize learning across various academic subjects in a professional curriculum (Roberti et al., 2017). Integration of a profession's unique knowledge, skills, and values is also necessary for students to develop a cohesive sense of professional identity (Fortune et al., 2018; Spira & Teigiser, 2010). Moreover, students are guided to integrate new learning with their individual life contexts, making learning personally meaningful and relevant (Stout & Holmes, 2013).

The key features of an integrative seminar include collaboration among small groups of students, focus on practical experiences, and active reflection. For example, students take turns presenting and facilitating peer discussions about clinical cases or ethical dilemmas from their field experiences (Fortune et al., 2018). Formative assessments are provided to promote critical thinking, increase self-awareness about learning, and modify the learning process based on identified student needs (Roberti et al., 2017; Schneller & Brocato, 2011). In addition, unfolding case studies, problem-based learning, and high-fidelity simulations have been used in integrative seminars (Hickey et al., 2018; Walshe et al., 2010).

The benefits of integrative seminars have been explored. Current literature supports the integrative seminar as an education strategy that promotes the development of creative, critical, reflective, and independent thinkers (Roberti et al., 2017). This learning format also enhances communication as well as interpersonal and leadership skills through the process of coteaching and collaboration with peers (Roberti et al., 2017; Spira & Teigiser, 2010). Although the documented value of integrative seminar is well-aligned with the desired outcomes of occupational therapy education (AOTA, 2018), the use of integrative seminars has not been reported in the occupational therapy literature. This article describes the application of the integrative seminar to the occupational therapy curriculum at a university in the western United States.

Integrative Seminar Design in the Occupational Therapy Curriculum

Integrative seminars were introduced into our curriculum in 2012. We designed the seminars to focus on the synthesis and application of fundamental occupational therapy knowledge and skills. One specific priority was to improve students' competence and confidence in preparation for Level II fieldwork. Moreover, we sought to create a learning format that reflected the students' preferred ways to learn and minimized their stress. In addition to the characteristic small group format (Roberti et al., 2017) (maximum of 15 students), the seminars were infused with problem-based learning, high-fidelity simulations, and team-based learning to promote active participation and critical thinking (Lexén et al., 2018; Shea, 2015). Off-campus learning activities were also incorporated as a tool to broaden students' perspectives and to provide a different avenue for practical application (Nakagawa et al., 2012).

The seminars were designated as pass/fail lab courses with minimal out of class assignments; the literature suggests that a pass/fail evaluation system may decrease student stress without negatively impacting academic performance (Spring et al., 2011). Only formative assessments are used, as the emphasis is on the process rather than the product of learning (Schneller & Brocato, 2011). Course grades are determined primarily by class participation and secondarily by written assignments, which include reflective journaling as well as post simulation, self-assessment, and peer assessments.

During each class meeting, a scheduled topic is introduced using a written case, a video, or a simulation with standardized patients (SP). This usage of various media is designed to accommodate diverse learning styles. Students are then tasked to complete a practical application assignment in breakout groups, each composed of four or fewer students. The breakout groups encourage all students, particularly those who are reluctant to speak up in a larger group, to contribute and also create a culture of accountability for all participants to stay on task. The students then reconvene and share their findings. During these discussions, the role of the instructor is to facilitate student participation, encourage peer feedback and critique, and promote critical thinking and reflection. Instructors often use the technique of asking questions to guide and challenge students on their emerging clinical reasoning and skills. Scaffolding is provided for students to seek out their own answers, as instructors generally

refrain from directly answering students' questions. The flow of class activities is dynamic and driven by student responses. Although there are scheduled topics and planned activities for each class meeting, the instructor continuously adjusts how class time is spent in response to student feedback and to the questions that emerge from the student-led discussions.

Development of the Integrative Seminar Series

Since the inception of the first integrative seminar course in 2012, we have consistently sought stakeholder feedback to guide the continuous development of the seminars in both structure and content. One recommendation frequently made by students was to have an integrative seminar every semester. In response to this suggestion, additional courses were gradually developed and implemented into the curriculum. The full four-course series that threads through the first 2 years (four semesters) of the curriculum was implemented from 2016 to 2018.

The content for each integrative seminar course was created in response to specific learning needs identified by students, faculty, and fieldwork educators. The seminar sequence is progressive. Table 1 shows the respective content areas and types of client cases addressed in the four courses.

Table 1

Course Content of the Integrative Seminar Series

Course	Focus of Learning	Types of Client Cases
OT 701	Explore effective learning strategies. Develop self-reflection and self-awareness skills. Articulate occupational therapy to stakeholders.	Children and adults living in the community who previously received occupational therapy services.
OT 702	Complete a client interview and occupational profile. Develop intervention plans. Explore the roles of interdisciplinary team members.	Three young adult clients who are in acute care and have both physical and psychosocial manifestations; for example, a client who sustained a recent spinal cord injury resulting in paraplegia is also experiencing depression.
OT 703	Observe and document occupational challenges. Identify interventions to address occupational challenges.	Client cases across the lifespan from infant to older adult. Presentation of cases is grouped by the primary presenting challenge, either motor, cognitive, or behavioral.
OT 704	Applying critical thinking and clinical reasoning skills throughout the occupational therapy process.	Complex client cases across the lifespan from infant to older adult. The cases provide exposure to nontraditional settings (such as community-based occupational therapy for at-risk youth), specialized settings (a simulated intensive care unit), and client populations who have complex needs (such as a post combat veteran who has polytrauma and posttraumatic stress disorder).

The timing of learning activities in each seminar was determined through coordination and collaboration among faculty members in order to be meaningful, relevant, and appropriate for what the students are experiencing in the entire curriculum. For example, in OT 704, students participate in a simulation in which they provide functional mobility interventions to a SP who recently had a cerebral vascular accident (CVA) resulting in hemiplegia and expressive aphasia. This simulated client is in acute care and using multiple pieces of medical equipment, including an intravenous therapy line, a Foley catheter, and a nasal cannula for supplemental oxygen. The simulation was designed to integrate

content from three other courses: one course provided content knowledge about the clinical manifestations of a CVA, one course addressed the management of medical devices, and one course provided laboratory instruction in functional mobility technique for various client populations. In seminar, students are challenged on their existing clinical, interpersonal, and technical knowledge and skills to complete a safe transfer that involves managing multiple medical lines while building rapport with a client who has limited verbal communication abilities, a realistic demand for contemporary occupational therapy practice.

Purpose

Since the full four-course series was recently implemented, we were interested in examining the perceptions of the first student cohort who completed the entire integrative seminar series. Our goal was to examine

- whether the curriculum design was engaging,
- whether our students' perceptions are aligned with the aspects of integration as identified in the literature, and
- whether the series had an impact on students' perceived preparedness for Level II fieldwork.

Method

Participants

Course survey results from the first cohort of entry-level occupational therapy students who completed the full four-course integrative seminar series were analyzed. This cohort of 42 students participated in integrative seminars from September 2016 to April 2018. Twenty were master's level students and 22 were doctoral students. All 42 students took the same integrative seminar courses. Because of attrition, 40 students remained in this cohort at the conclusion of the data collection period in November 2018.

Procedures

In addition to the routine course evaluation mandated by the university, a student feedback survey designed by the instructors was given at the conclusion of each integrative seminar course for the purpose of continuous course improvements. The software Survey Monkey was used to develop the surveys and collect student responses anonymously. The students were given time in class to complete the surveys to encourage a high response rate.

In addition, near the conclusion of the students' second Level II fieldwork rotation, we administered another anonymous survey to the same cohort of students to gather feedback regarding the format and content of the entire four-course series and its perceived impact on students' fieldwork performance. We were particularly interested in student insights post fieldwork, since a main impetus for the development of the integrative seminars was to increase students' preparedness for fieldwork. Per the survey development process delineated by Portney and Watkins (2015), we created guiding questions, informed by our literature review regarding the various dimensions of integration that occur during integrative seminars. A preliminary draft of the survey was reviewed by two peer occupational therapy faculty and piloted with four occupational therapy students from a different cohort. After multiple revisions based on faculty and student feedback, the final version of the post fieldwork survey was administered in November 2018 using the online survey software Qualtrics.

Data Analysis

This study focuses on analyzing the data gathered from the surveys (five total) including both quantitative data from Likert scale items and qualitative data from narrative comments. Descriptive

statistics were used to analyze the quantitative data. Narrative comments were coded by common themes. The Samuel Merritt University Institutional Review Board approved this study.

Results

Response Rates

The response rate for the five surveys ranged from 78% to 100% (see Table 2).

Table 2
Survey Response Rate

Survey	Number of Respondents/ Total Students	Percentage of Students Responding
OT 701 course feedback	42 / 42	100%
OT 702 course feedback	35 / 42	83%
OT 703 course feedback	34 / 42	81%
OT 704 course feedback	34 / 42	81%
Post Level II fieldwork survey	31 / 40	78%

Selected Likert Scale Items from Course Feedback Surveys

Although each course feedback survey included unique content customized for the respective integrative seminar course, all four surveys included questions about whether the course format was engaging and whether the course facilitated integration of curricular content. Table 3 shows the results regarding whether the format of the class was engaging. Table 4 shows responses regarding the integration of content.

Table 3
Responses to the Course Feedback Survey Item: "The Format of the Class Kept me Engaged"

Course	Frequency of Responses				
	All the time	Most of the time	Sometimes	Rarely	Not at all
OT 701	24 (57%)	18 (43%)	0 (0%)	0 (0%)	0 (0%)
OT 702	8 (23%)	14 (40%)	13 (37%)	0 (0%)	0 (0%)
OT 703	7 (21%)	13 (38%)	14 (41%)	0 (0%)	0 (0%)
OT 704	14 (39%)	19 (53%)	3 (8%)	0 (0%)	0 (0%)

Table 4

Responses to the Course Feedback Survey Item: “I Learned to Integrate and Apply Content from Other OT Courses”

Course	Frequency of Responses				
	All the time	Most of the time	Sometimes	Rarely	Not at all
OT 701	18 (43%)	19 (45%)	5 (12%)	0 (0%)	0 (0%)
OT 702	12 (34%)	16 (46%)	7 (20%)	0 (0%)	0 (0%)
OT 703	9 (26%)	25 (74%)	0 (0%)	0 (0%)	0 (0%)
OT 704	24 (67%)	12 (33%)	0 (0%)	0 (0%)	0 (0%)

Narrative Comments from Course Feedback Surveys

In addition to the Likert scale questions, the course feedback surveys included open-ended questions about what worked well in the course, what did not work well, and suggestions for improvement. Across the four surveys, 90% to 95% of the respondents provided narrative comments. The length of comments varied widely, from short phrases to multi-sentence paragraphs. Overall, the students provided the most lengthy, substantive content in their responses to the question about what worked well; more students responded “N/A” or “nothing” to the questions about what did not work well and when asked for suggestions for improvement. Narrative comments were coded and sorted by similar responses. The most frequently stated responses to each topic are summarized below.

What worked well. Several key points emerged from comments provided by the students across all four semesters.

Small class size. The students expressed appreciation for the small class, which increased their comfort level with contributing to discussions. One student noted, “The small group size created a comfortable and safe environment for sharing.”

Peer collaborations. The students highly valued and enjoyed the opportunity to collaborate with peers and gain different perspectives for approaching clinical cases. A student explained, “The amount of discussion we had helped me develop new ways of thinking about a certain diagnosis/case scenario. It was great to hear my peers’ thought processes about interventions and to read/discuss their documentation.” Another student noted, “It helped hearing other people’s observations and perspectives. Sometimes I would miss certain aspects.”

Practical application of learning. The students “enjoyed that this class allowed us to practice what we have learned.”

Self-discovery. Multiple students commented that this class allowed them to learn about themselves as emerging occupational therapists. A student explained, “The standardized patient interview was really helpful in evaluating how I would interact with patients.”

Simulation-based learning. Many students were enthusiastic about simulation-based learning and particularly valued the debriefings with SP feedback and peer discussions. A student commented, “The simulation with the SP and then reviewing the recordings and receiving and giving feedback was the highlight for me.” Another student noted, “Whether I was the active learner, observer, or just reading the case, the scenarios made me think in multidimensional ways.”

Grading scheme. The students also appreciated the grading scheme for the seminars. One student stated, “In our other classes, we are too worried about memorizing material for tests. So it’s nice to have that pressure off and just have some thought-provoking discussion.”

What did not work well. Different topics of what did not work well were identified across the four semesters.

Classroom space. During the first semester, several students expressed concern that their classroom was “way too small.” A student requested, “Please find us a bigger room, we were cramped.”

More structure for assignments. A common theme for the second semester was needing more structure and guidance for completing the client intervention plans. A student expressed, “A little more clarity on what is expected on each assignment would be appreciated. The templates were useful.” Another respondent noted, “Sometimes I was unsure of what was being asked.”

Monotony of learning activities. For the third course, which included primarily viewing videos and practicing documentation without any simulations or off-campus learning activities, multiple students noted that the class felt “dry” and less engaging. A student reported, “The process of watching videos and documenting felt repetitive week after week.”

Shared Google docs. From the fourth semester, two students noted that having a shared Google doc to record break-out discussions may have hindered the quality of the collaboration process. A student explained, “Having all the group answers on the same Google doc while you work leads to a lower level conversation about the cases because we all know what the others put ahead of time.”

Suggestions for improvement. The most common suggestion across the semesters was to include more simulations in the courses. A few students even provided specific simulation scenario suggestions that they found potentially challenging to be added to the course content. For example, one student suggested, “It would be helpful to have a simulation in which students have to administer a standardized assessment.”

Likert Scale Items from the Post Level II Fieldwork Survey

The post Level II fieldwork survey sought feedback about the entire four-course series. The quantitative results are summarized in Table 5.

Table 5

Responses to Likert Scale Items from the Post Level II Fieldwork Survey

Survey Item	Frequency of Responses			
	A great deal	A moderate amount	A little	Not at all
<i>To what extent did the integrative seminar series . . .</i>				
Help you apply what you learned in lectures and lab to OT practice?	16 (52%)	12 (39%)	3 (10%)	0 (0%)
Develop your critical thinking skills?	20 (65%)	9 (29%)	2 (6%)	0 (0%)
Develop your interpersonal skills with colleagues?	21 (68%)	8 (26%)	2 (6%)	0 (0%)
Develop your interpersonal skills with clients?	14 (45%)	12 (39%)	5 (16%)	0 (0%)

Develop your unique professional identity as an occupational therapist?	11 (35%)	13 (42%)	7 (23%)	0 (0%)
Contribute to your readiness for Level II Fieldwork?	11 (35%)	17 (55%)	2 (6%)	1 (3%)

Narrative Comments from the Post Level-II Fieldwork Survey

Eight narrative comments were received in response to the survey item “other comments or recommendations for improvement.” Several themes emerged across the responses.

Types of learning activities. The students valued the types of learning activities because they were enjoyable, fit their learning preferences, or made lasting impressions. A student explained, “The techniques we learned and experiences in simulations, exploring our community, and through case studies provided a lot of memorable material I still refer back to.”

Practical application. A student commented, “Integrative seminar classes provided a great opportunity to consolidate what we were learning from other classes, bringing it all together and applying it to real life situations.”

Simulations. The students expressed appreciation for the learning gained from the simulations provided in the seminar series, especially now that they are in Level II fieldwork. A student expressed, “I found the simulations helpful in preparation for fieldwork.”

Discussion

The overall response from the first cohort of students who completed the integrative seminar series is positive. The response rate across the surveys is relatively high, thus providing an adequate representation of the cohort’s perceptions. The format of the courses, with an emphasis on active learning and peer collaboration, was engaging for the students and even made lasting impressions for some. The small class appeared to create a safe, comfortable context for students to explore and deepen their learning. Our students’ satisfaction with the class size is consistent with findings from the literature that class size has a significant impact on college students’ perceived learning (Chapman & Ludlow, 2010); small group peer interactions have been shown to promote higher-level thinking, including cognitive restructuring and problem-solving (Wilkinson & Fung, 2002). The pass/fail grading scheme may have also contributed to some students’ comfort levels in the courses by reducing their stress (Spring et al., 2011) about academic performance.

The seminars appeared to support students in integrating and applying what they were learning in the occupational therapy curriculum, both before and during Level II fieldwork. The courses also contributed to the occupational therapy students’ perceived development in critical thinking, interpersonal skills, and professional identity, all of which align with the benefits of integrative seminars documented by other professions (Fortune et al., 2018; Roberti et al., 2017; Spira & Teigiser, 2010). The students were particularly enthusiastic about the high-fidelity simulations infused throughout the integrative seminar series; our current findings support what has been documented in existing literature about occupational therapy students’ favorable response to simulation-based learning (Gibbs et al., 2017; Shea, 2015). The seminars’ contribution to students’ perceived readiness for fieldwork was a particularly significant finding, as this supports the practical value of integrative seminars as an effective tool in the professional preparation of occupational therapists.

The students' comments on what did not work well included concerns about the classroom space. A growing body of research suggests that the physical space of classrooms affects the learning process. College students have reported that rooms with ample space for them to spread out work best for learning (Granito & Santana, 2016). In response to student feedback, we have taken extra measures to ensure that a suitable classroom is assigned each semester. The classroom furniture is often rearranged into a circular formation conducive to discussions, as this circular arrangement has been shown to enhance interactivity among class participants (Wilson & Randall, 2012). Students also expressed concern about needing more structure for completing course assignments in the second semester, which is when students are required to apply problem-based learning for the first time in our curriculum in order to complete client case-based assignments. The students' desire for more structured guidance highlights the importance of instructors' acknowledging that transitioning to a problem-based learning approach may push some students outside of their comfortable, familiar way of teacher-directed learning. Abdalla et al. (2019) recently highlighted the importance of educators intentionally and thoughtfully supporting students' acceptance and appreciation of problem-based learning as a teaching-learning tool; specific training and mentoring for faculty on how best to support students in this process may be beneficial. Lastly, although quantitative results demonstrate that students generally found all four seminars to be engaging, it was notable that multiple students commented on the repetitiveness of the OT 703 course, which included only in-class activities. These comments may reflect the millennial students' high expectations for "entertainment value" in each course (Toothaker & Taliaferro, 2017, p. 347); in response, we have since added four new simulations to this course.

Limitations

The current findings should be interpreted with caution, as they only reflect the perceptions of one cohort of students; it would be beneficial to replicate data collection with other cohorts or at a different occupational therapy program. In addition, the survey instruments used to collect data had limitations as the surveys were initially designed for program improvement of individual courses rather than for a systematic analysis. Although there were commonalities in questions across the surveys, they were not identical because each was customized for a particular course. This posed some challenges in how best to summarize the findings. The differences in wording and ratings scales may have also influenced the data gathered. Moving forward, we will review our existing surveys and make revisions as indicated.

The current findings are limited to students' subjective perceptions. We have not yet identified an appropriate, validated outcome measure to demonstrate how participating in the integrative seminars may have affected students' actual clinical performance. Such an objective measure of students' clinical performance would provide more robust evidence supporting the value of integrative seminars in occupational therapy education.

Future Directions

Looking ahead, we plan to continue the student feedback process. In particular, we will continue administering the course feedback and the post fieldwork surveys to subsequent cohorts of students to investigate the consistency of our findings across cohorts. In addition, since the full integrative seminar series has now been implemented into our OTD curriculum, we would like to ensure that all course instructors (potentially as many as 12) have adequate training and support to facilitate this type of learning, as integrative seminars pose unique challenges for faculty (Hickey et al., 2018; Roberti et al.,

2017; Stout & Holmes, 2013). Our department is currently establishing a training process to ensure consistent implementation of best practices across the integrative seminar courses.

Since a primary reason for developing the integrative seminar was to increase students' readiness for Level II fieldwork, it would be important to continue using fieldwork outcomes to drive our ongoing course improvements. It would be informative to collect data about fieldwork outcomes more systematically, such as through aggregate analyses of the Fieldwork Performance Evaluation for recent student cohorts or a survey administered to all of our current fieldwork educators.

Applications to Occupational Therapy Education

The findings from this data analysis support the potential value of integrative seminars in occupational therapy education, and the insights gained may be helpful for occupational therapy educators who desire to implement integrative seminars into their curriculum design. It may be particularly relevant and beneficial for doctoral level occupational therapy programs to incorporate integrative seminars as a strategy to increase the rigor in promoting autonomous learners and critical thinkers, traits decidedly expected from doctoral students (Brodin, 2016; Li, 2018). The integrative seminar shows promise as a student-centered, evidence-based approach that engages contemporary occupational therapy students and provides them with a safe space for developing skills in self-directed discovery and critical thinking for lifelong learning.

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