Beyond Active Learning: A Case Study of Teaching Practices in an Occupation-Centered Curriculum

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Although occupation-centered curricula are highly promoted, the teaching processes that convey such designs remain unclear. This case study elucidated occupation-centered teaching practices. Interview and observational data were collected over 8 weeks, and analysis involved coding transcriptions, data matrices, concept maps, journaling, and writing. Participants augmented active learning strategies with strategies that linked course topics to the subject of occupation. The use of linking strategies suggested that: (a) course content was treated as two-tiered; (b) neither content nor instructional processes were inherently occupation-centered; and (c) subject-centered education strengthens social learning theories. Although curricula may appear occupation-centered based on a curriculum description and course content, ultimately “linking opportunities” in the classroom constitute an essential feature that demarcates a program as occupation-centered.


A
n occupation-centered curriculum has been represented as the foremost tool for bringing about a future where occupational therapy practice explicitly reflects the field’s core subject, human occupation (Yerxa, 1998). For that reason, the occupation-centered curriculum has been described as “an imperative for the new millennium” (Whiteford & Wilcock, 2001, p. 81), as well as an imperative for accreditation (Accreditation Council for Occupational Therapy Education® [ACOTE], 2005). The hopes and necessities associated with occupation-centered curricula have led educators to spend a great deal of energy on the design side of curricula, especially the development of courses, course sequences, and curriculum descriptions that incorporate occupation. Considerably less attention has been given to explicating, through empirical research, teaching and learning processes that authenticate occupation-centered curricular designs. New curriculum designs have little power to promote change if they are not used as blueprints for what happens every day in the classroom (Stark & Lattuca, 1997). As argued by Baxter Magolda (1999), new curriculum designs that are simply superimposed on traditional beliefs and assumptions about teaching may thwart the efforts of educators to graduate self-defining professionals. This article describes one set of findings from a larger case study that directly pertain to classroom processes used to center learning on the core subject of human occupation in one occupation-centered curriculum.

Background and Conceptual Framework

The term occupation-centered education has been used to convey the importance of occupation as a central subject and organizing construct in occupational therapy curricula (Nielson, 1998; Wood et al., 2000; Yerxa, 1998). Yerxa (1998) suggested that “our educational programs need to initiate a curricular renaissance by using occupation as the central organizing idea of the curriculum” (p. 369). The promotion of a core subject, human occupation, as the center of teaching and learning parallels Palmer’s (1998) notion of “subject-centered education” (p. 115). Palmer noted that disciplines are communities that concentrate study and learning around a core
subject; the core subject is related to, but exists apart from, the theories that explain it, the texts that talk about it, the courses one takes to learn it, and even apart from the discipline that studies it. The subject is “the great thing” around which a community gathers and that calls the community “to know, to teach, to learn” (p. 107). Thus subject-centered education is characterized by a core subject having “a presence so real, so vivid, so vocal, that it can hold teacher and student alike accountable for what they say and do” (p. 117).

Applied to occupational therapy (see Figure 1), subject-centered teaching may mean that the “great thing,” or core subject, refers to the human motivation to occupy time and place, and in so doing, to influence health, well-being, and quality of life (Yerxa, 1998). A wide array of curricular topics helps explain the subject, including anatomy, neuroscience, life span development, activity analysis, administration, and theory. Teaching and learning processes refer to any carefully designed process that facilitates connections between knowers, content, and the subject. The knowers may include the graduate students and faculty members, clients and stakeholders, and the larger community of scholars who study aspects of human occupation. In Figure 1, I also situated subject-centered education in the contexts of the profession, the individual educator’s biography, and the institution, all of which may influence the characteristics of the knowers, how the core subject is constructed, the content selected to explain the core subject, and the teaching and learning processes selected.

Subject-centered education has been proposed as an alternative to both expert-centered education, which is sometimes rooted in objectivism, and student-centered education, which can be rooted in relativism (Palmer, 1998). Objectivist-based education deals with the subject as if its precise nature were already known. Relativist-based education deals with the subject as if it cannot be known at all outside one’s personal point of view. In both cases, Palmer

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Figure 1. Elements of subject-centered education.
argued that learners have little incentive to connect personally with the subject: in one (objectivism), they simply need to know the facts; in the other (relativism), they can think whatever they want. Subject-centered education invites learners into a personal, dynamic conversation with the subject, peers, and colleagues. The conversation is guided by the norms of inquiry accepted within the professional community that “keeps testing old conclusions and coming into new ones” (Palmer, 1998, p. 104).

Based on the proposition that subject-centered education is consistent with occupational therapy's attempts to build curricula centered on occupation and to engage learners in knowledge construction, Palmer's (1998) outline for subject-centered education was adopted as one part of the conceptual framework for the study. Findings pertaining to two research questions are addressed in this article: (a) What instructional processes are associated with occupation-centered education in a particular institutional context? and (b) What beliefs about learning and knowing are reflected in the instructional processes in an occupation-centered curriculum?

Methodology

A qualitative case study explored a “bounded system or case over time through detailed, in-depth data collection involving multiple sources of information rich in context” (Creswell, 1998, p. 61). The bounded system, or case, for this project included one occupational therapy program considered an exemplar for occupation-centered education.

Case Selection

The case for this study was selected using intensity sampling, which samples for potential to provide rich information about the research topic, which was, in this study, teaching and learning processes that convey an occupation-centered curriculum design (Patton, 2002; Stake, 2000). The initial case identification process began with a discussion with educational consultants and leaders in the field who were asked, in their opinion, “what graduate programs represent the top occupation-centered curricula nationally?” An initial list of eight programs was generated. A literature search revealed that three of the recommended cases had published descriptions of their curriculum or curriculum design process. One of the three was eliminated because a new program director was being hired. The final case was selected because of several features: (a) the faculty had undergone an extensive 3-year study and curriculum design process that was grounded in occupational science and documented in the literature; (b) faculty members had given a number of presentations on occupation-centered curriculum design at the American Occupational Therapy Association's Annual Conference & Expo; (c) faculty members were often invited by other programs as consultants on occupation-centered curriculum design; (d) all faculty members were willing to mutually explore features and practices of their teaching through videotaped classroom observations and reflections on their classroom activities over an extended time; (e) the program was not in the midst of major change; and (f) the program had a longstanding record of success, with 100% of its graduates passing the certification exam. The most compelling feature of the case for this study, however, was that the curriculum design process had resulted in a shared commitment among faculty members that occupation was indeed the central subject being taught. Moreover, the group's commitment to occupation as the central subject did not stop with the selection, sequence, and development of courses. Their shared commitment to occupation as the core subject helped guide the details of day-to-day teaching, such as the inclusion and integration of some class content, the bold elimination of other content deemed marginal to an occupation-centered curriculum, the selection of learning resources, and the adoption of certain teaching processes. In other words, the curriculum design was being fleshed out all the way down to each course, its content, assignments, grading rubrics, teaching and learning processes, and the construction of individual class sessions. Therefore, the case offered an instance for exploring classroom processes that enact and convey to students an occupation-centered curriculum design.

Setting and Participants

The study took place at a large research public university in the United States. According to informational materials about the program, the curriculum was designed to go beyond training clinicians for current practice and to build graduates’ knowledge of how occupations contribute to development, adaptation, and wellness in all of society and across the life span. The Master of Science coursework required 2 years, or six semesters, to complete. The faculty designed the courses to be tightly integrated and carefully incremental in the demands made on students. Faculty strove to build on what students learned in prior classes, to integrate multiple fieldwork experiences across courses, and to progress students into more self-structured and less faculty-structured assignments and experiences. At the time of this study, the makeup of faculty positions included one clinical instructor, three clinical assistant professors, two clinical associate professors, one assistant professor, two associate professors, and one professor. Faculty had been teaching from 2.5 to 18 years. All nine members of the faculty were women. For this study, 10 courses offered in the
fall semester were observed for 3 weeks each. Classes and labs that were observed met from 3 to 8 hours weekly and covered topics ranging from theory, life span development, research, biomechanical aspects of practice, activity analysis, professional organizations, regulatory bodies, and administration. All nine faculty members participated in the study.

**Data Collection**

Data were collected using semistructured and unstructured interviews, videotaped classroom observations, participant observation, and artifact review (Denzin & Lincoln, 2000; Merriam, 1998; Patton, 2002). The initial semistructured interview was adapted from interviews designed by Dirks (2000), Ah Nee Benham and Cooper (1998), and Colflesh (1996) and explored key experiences leading to a career as an educator and a description of the course I would observe. Classroom observations were recorded using field notes. Two to three observations for each course were also videotaped. The camera was continuously present in an effort to desensitize faculty and students to its presence in the learning environment. Faculty and students were involved in deciding which class sessions were videotaped. Students unanimously preferred not to know when the camera was recording.

The second semistructured interview used stimulated recall and photo elicitation techniques based on the videotaped observations (Prosser, 1998). Each faculty member reflected on her pedagogical practices as demonstrated on researcher-selected video segments or field notes. Segments were selected that captured characteristic or uncharacteristic teaching activities for that individual. Other segments were selected for their relevance to the conceptual framework for the study. The interview concluded with each participant creating a visual representation of the core principles and beliefs guiding her teaching.

**Data Analysis**

Analytical activities interspersed with data collection included reading interview and observation transcriptions, preliminary line-by-line coding of interview and observation data, reading literature related to the conceptual framework for the study, documenting analytical notes in my research journal, developing concept maps to help make sense of the data as it was being collected, and engaging in “practice writing” exercises to help establish a narrative framework for the data. On completion of data collection, initial analytic codes generated from the conceptual framework were systematically assigned to interview and observation data. With the help of other researchers, codes not associated with the conceptual framework were also developed. Matrices, concept maps, and models were developed to help construct codes and relations between codes.

Other analytic activities included reading each participant’s interview data in its entirety, extracting significant statements to be formulated into a narrative that could help shed light on the research questions (Creswell, 1998). The primary analytic tool at this point in data analysis was writing itself (Richardson, 2000). Through writing, I experimented with several story lines that seemed congruent with the case.

Most of the videotaped data were secondarily transcribed and analyzed as field notes. Additionally, the videotapes were used to help refresh my memory of the details of each class I observed and to help “reenter” those classrooms when beginning the writing process (Patton, 2002). Using the videotapes in this manner, I could remember the verbal intonations and nonverbal gestures of faculty, the emotional tone of the class, the physical space, humorous moments, and the students’ level of engagement.

As a conceptual framework, subject-centered education was used loosely throughout the study as one way of seeing and listening to the data. This concept helped shape some of the questions I asked faculty in response to what I saw in their classrooms and heard in their interviews. For example, I asked several faculty members to describe the core subject or overall aim of their course and how individual topics related to that aim. The conceptual framework provided a starting point for coding both observation and interview data and it provided some direction for selecting readings that aided data analysis.

**Trustworthiness**

This project used multiple data sources, including in-depth interviews, videotaped observations, participant observations, field notes, and artifacts. Several analytical frames were also used to experiment with various interpretations of the data. An audit trail was implemented in earlier stages of data analysis, but became challenging in later stages when coding became inseparable from memo writing, concept mapping, and draft writing. In the early stages, codes, code definitions, and new codes were tracked using Version 4.2 of Atlas ti [computer software] (Muhr, 1993). A journal was used to record ideas, note possible interpretations of data, raise questions about data or about my telling of the data story, examine contradictions, and relate readings to the data. Debriefing with others was used to explore alternative interpretations. Being on site for 8 weeks allowed me to discuss preliminary interpretations with the faculty through ongoing informal interviews. A formal member check was also conducted after data analysis and writing.
Findings

Faculty used active learning methods common within professional education and adult learning contexts, including small and large group discussion, labs, case studies, journal writing, small-group activities, field observations, problem-based learning, interactive lectures, and guest presenters. The concept of using subject-centered education, however, helped illuminate additional teaching processes that seemed to transform these common instructional methods from active learning to actively centering learning on the subject of occupation. To illustrate these processes, I provide examples from two labs and two classroom discussions. The first lab actively engaged students in learning biomechanical assessments and the underlying anatomical structures and kinesiological principles of those assessments. The second lab actively engaged students in learning how to apply activity analysis to various activities. The class discussions actively engaged students in learning how handwriting develops among children.

Although these examples deal with content often considered essential to entry-level curricula, they also illustrate that neither content nor instructional methods were inherently occupation-centered. Rather, content and teaching methods became occupation-centered only to the degree to which faculty paired active learning methods with processes that explicitly tethered the content to the core subject. In each example, instructors appeared to target two levels of content simultaneously: one, the content under immediate attention, such as learning biomechanical assessments and, two, the core subject behind the immediate content, particularly how the day's topic related to a subject not readily visible to students. I discuss five instructional processes used by the faculty to center learning on occupation: the pairing of lab exercises and class discussion with orienting remarks, clinical stories, contradictory readings, particular content sequences, and inductively structured discussions.

Pairing Lab Exercises With Orienting Remarks

Instructors sometimes used lab-based lectures to introduce the day's topic. These lectures were largely interactive in that the lecture involved the presentation of content by the instructor intermingled with questions and comments by students. During these interactive lectures, instructors simply interjected comments that reminded students that memorizing individual muscles or applying activity analysis by rote was not the ultimate goal. For example, in a lab that included an interactive lecture reviewing upper-extremity anatomy, the instructor interjected, “I want you to understand the relationships of muscles to a group of muscles and what those muscles allow someone to do, or what happens to daily function if someone is having trouble moving a certain group of muscles.” Her comments seemed to nudge students' attention beyond the stand-alone anatomical structure to “why it matters” when an individual is performing a specific task, and to “what practical difference does this information make?”

Similarly, in a review session on anatomy of the hand, students feverishly took notes about specific tendons that supported a hand movement called tenodesis. The instructor carefully added, “but more important is that you understand that because the tendons cross over the wrist, it impacts the function of the hand in daily tasks.” Similarly, in her exam review, she summarized:

I want you to understand the relationship of the muscles to each other and what happens if someone is having trouble moving a certain group of muscles. If I show you muscles on the overhead [projector], I expect you to see what they do together and what a person loses if it [the muscle group] isn't working . . . to differentiate the importance of the muscles rather than knowing the names of all the structures.

The active learning method, interactive lecture, was used to convey the content under immediate attention, structures of the upper extremity. But interjecting orienting remarks seemed to draw students' attention to the subject behind the content. The use of orienting remarks also seemed to insert a small amount of tension between how students traditionally learned anatomy—by rote memorization of structures—and how they were to learn anatomy in this case by linking it to what people do every day.

In another lab, an instructor used an interactive lecture to introduce the topic of activity analysis. During her introduction, the instructor interjected orienting remarks about how activity analysis was associated with one occupation-centered model in the field, thus explicitly centering the study of activity analysis on the study of occupation in a broader sense:

How does activity analysis relate to the Person–Environment–Occupation model you've been studying? . . . the level of occupation. This is the level where activity analysis fits and where we will focus over the next 3 weeks. This is key to planning and implementing intervention with clients. But why? Why do activity analysis? One, to understand the occupation. If we understand the occupation, we can begin to surmise or imagine the meaning it may hold for someone. Of course, you have to always link it to an individual, but the activity analysis gives you a general place to start exploring meaning [that] the occupation holds and how it may be used in therapy. . . .

Afterward, without hesitation, this instructor identified the primary subject of her lab as “occupation-centered practice,” the core subject to which the individual topics of the course, such as activity analysis, pointed.
Pairing Lab Exercises With a Clinical Story

After the interactive lecture portion of the activity analysis lab, students worked in small groups actively engaged in cooking, play, and work activities in order to complete a comprehensive analysis of each task. After completing the analysis, students came back together in a large group to discuss their experiences, analyses, and how each activity could be graded to meet therapeutic goals of clients. The instructor interjected a clinical story about grading an activity for a child in a school setting. In offering this clinical example, the instructor supported the central theme in her overall lecture that day—she wanted to “make sure that they see how activity analysis is related to occupation.”

You need to adapt and grade an activity to address a client’s specific goals. But you need to do that without the activity being contrived. I have a couple of kids who will string beads as long as there is string. Yes, for a child who is having trouble I may use a pipe cleaner rather than a string, but I don’t want it to be contrived. I don’t need to keep doing that just to make the activity harder in order to build strength and coordination. The goal is to have them do the occupations their classmates are doing using the same materials. To use it [bead stringing] simply to increase strength is on the order of stacking cones [an activity with little meaning used to exercise reach and strength].

As students suggested ways to grade the activity to address therapeutic goals, the instructor’s story, in effect, introduced a bit of tension into their learning. She critiqued the tendency to apply activity analysis and grading to an occupation, stringing beads, by rote to improve strength and coordination. Her story centered the immediate content, activity analysis, in the subject behind the content, enabling clients to engage successfully in the occupations they want and need to do within naturalized contexts.

Pairing Lab Exercises With Class Sequences

In an anatomy lab, the process of pairing an anatomical review exercise with a particular content sequence served to link the body structures being assessed to the core subject of occupation. For example, the instructor began the lab by asking students to take turns watching each other perform a task, such as cutting paper with scissors, and to identify specific movements the task required. Next, the instructor assigned a movement limitation, such as “unable to supinate the forearm,” to some students. Not knowing what limitation was assigned, other students were asked to observe the task performed again, this time with the assigned impairment impeding the performance, and identify the deficit. After the students completed this task, the instructor reviewed muscle groups and demonstrated specific evaluations of motion, which students then practiced performing.

This class sequence, beginning with task performance, communicated that the occupational therapy process is situated in the occupations that clients perform and works backward to the specific deficits they experience and further backward to the specific structures contributing to those deficits. The active exercise of observing task performance helped convey the content under immediate attention, biomechanical assessment. But by sequencing the content in a particular way, the instructor highlighted the subject of occupation behind the content.

Similarly, in another lab the instructor began by discussing a “functional motion assessment.” She asked students to watch people on videotape move while involved in work, household, and therapy activities. From the functional motion assessment, students were asked to identify possible reasons for the movement problems, which included naming particular joints, groups of muscles, or innervations that may have been impaired. Finally, the instructor demonstrated and had students practice how to measure movement at specific joints and test the strength of specific muscles.

Like the previous example, students were actively engaged in a lab exercise, but the exercise became more subject-centered through the content sequence. The lab exercise addressed the content under immediate attention, how to complete a functional motion assessment. However, by first introducing occupations performed in context, the core subject behind functional motion assessment was also stressed.

Pairing Lab Exercises With Contradictory Readings

In a lab on grip-strength testing using a dynamometer, students were actively engaged in positioning their classmates according to the test protocol and measuring and recording their grip strength. After this experience, the instructor assigned a research article for the next lab that concluded that dynamometer measurements are not good indicators of occupational performance. The reading prompted a lively discussion and students asked, “Why use biomechanical assessments at all?” and “Why not use observation of functional tasks as the primary means for determining client deficits?” The instructor answered their questions with questions such as, “What information can you obtain from a dynamometer that you cannot obtain from an observation?” and vice versa. The reading and discussion introduced tension around the stand-alone procedure of measuring grip strength, discouraged students from focusing on the technique alone, and refocused student attention on the connection between grip strength measures and the subject just behind this technique, the performance of occupation in context.
Similarly, in a lab associated with activity analysis, students were actively engaged in applying a traditional activity analysis to activities such as playing games, making cookies, and copying and filing forms. At the end of this lab session, the instructor assigned an article that critiqued traditional activity analysis and suggested another analytic process believed more sensitive to occupation as performed by a specific person in a specific environment. This reading introduced tension into the content of activity analysis, which could easily be taught as procedural and nonproblematic. But by pairing the active lab exercise with the contradictory reading, the instructor in effect “cracked open” the taken-for-granted procedure and created an opportunity for students to see behind activity analysis to the subject that gives it meaning, occupation.

**Pairing Class Discussion With Inductive Inquiry**

Class discussion was used throughout this case study in whole-class formats with the instructor acting as facilitator and in small student group formats without a faculty facilitator. Similar to the lab examples mentioned previously, the instructor used active discussion to convey the specific content under immediate consideration, but paired discussion with a secondary process to highlight the subject of human occupation just behind the content. This pairing was sometimes accomplished using an inductive inquiry process in which the instructor started a discussion focused on the immediate content, then engaged students in discussion of progressively widening foci to the larger subject of occupation.

For example, in a course on the development of occupation in childhood, the instructor initiated a discussion on the emergence of handwriting among preschoolers. She first explained why she had placed the topic of handwriting in a course unit on literacy. She then projected video-taped examples of 3-year-olds “writing their names.” She asked students to examine these examples and discuss what capacities seemed to emerge as handwriting among preschoolers became more legible. Students actively identified and discussed specific skills that seemed to become more pronounced as handwriting developed. The instructor then broadened the discussion to the students’ field experiences in preschool classrooms, a service learning component of the course that involved 3 hours in various preschool venues each week. She asked, “What have you seen in your classroom related to writing?” In response, students offered numerous relevant and humorous stories. During this time, student experiences were often mirrored back as examples of, or contradictions to, the readings they had reviewed for class that day.

After discussing personal experiences, the instructor again further broadened the discussion to build a bridge from present content and personal experience to the subject of occupation. She asked what implications students saw for occupational therapy if the social construction of writing exists even before children can perform the task. Additionally, summaries such as the one in the next paragraph were typically inserted in class discussions to relate handwriting to the larger and somewhat out-of-view subject of occupation.

...[T]hink about the difference in the constructed nature of creating something [handwriting] versus sitting down and practicing it. So, bottom line, these readings really help us capture what children need in order to construct literacy. You can't just focus on the technical skill of handwriting. But this [the socially constructed nature of handwriting] also links back to how occupations in general are acquired by children. These readings are just as much about how occupations are acquired through an emergent process of meaning. You could apply them to self-care occupations as well.

The course unit on literacy and the emergence of handwriting ended with a very detailed analysis of the mechanics of writing, which is considered a more traditional approach to learning handwriting content. Thus, content on handwriting was addressed using active learning methods such as discussion and field experience, but those methods were paired with an inductive inquiry process that prevented handwriting content from becoming an end in itself and simultaneously brought it into view the subject of occupation.

**Discussion**

The implications of this study are both conceptual and practical. Conceptually, the results of this study helped to rethink three common topics within the occupational therapy education literature: (a) content, (b) instructional processes, and (c) the social nature of learning. I discuss each of these conceptual implications and develop related implications for teaching and learning. Further suggestions can be found in the Appendix.

**Two-Tiered Content and Skill Competencies**

What content to teach entry-level graduate students has been a matter of much consideration. Incorporating curricular content on public health policy, advocacy, entrepreneurship, cultural competence, community practice, evidence-based practice, and occupational science is emphasized (Coster & Schwartz, 2004; Kornblau, 2001; Pierce, 2001; Velde & Wittman, 2001). In some programs, biomedical content, such as anatomy and physiology, has been reconstituted as prerequisite to admission or integrated into other courses. Content on some practice techniques has been reduced (e.g., Wood et al., 2000).
In this study, not only was what to teach a consideration, but all content, even a taken-for-granted topic like activity analysis, was consistently dealt with as if it were two-tiered. That is, instructors seemed vigilant about conveying not only the specific content under immediate attention (tier one), but also how this tier was tethered to a core subject just behind the content and consistent with the curriculum design (tier two). Similarly, competent skill performance was treated as two-tiered. On one tier, the instructors ensured that students could demonstrate competent performance of a variety of evaluations and interventions. On a second tier, the instructors set up skills content and labs to help students glimpse a just-out-of-sight subject that informed each skill and its use with clients. Students practiced the skills of analyzing activities, identifying body structures, measuring each other’s motion, and assessing the development of handwriting. Simultaneously, however, the instructors continually paired these active learning exercises with processes that invited students to look behind the skill to, as one instructor stated, “why it matters when an individual is performing a specific task.”

Implications for teaching. A subject-centered teaching framework can help remind educators that few content areas are inherently occupation-centered, but become so in how instructional processes are orchestrated as “linking opportunities” for students. Educators may best bring to life an occupation-centered curriculum by implementing learning processes by which all content is taught as two-tiered, one tier made up of the immediate topic under consideration and a second tier consisting of a subject behind the content that students often struggle to glimpse. Therefore, in designing courses and individual class sessions, educators may ask, What processes or activities will I develop to explicitly link this course, class topic, or clinical experience to the subject of occupation to which it relates? In asking this question of my own course, Kinesiology of Occupation, I selected the Ecology of Human Performance (Dunn, Brown, & McGuigan, 1994) as the conceptual model or organizing framework for the course. The model helps emphasize the links between body structures, human movement, contexts, and specific tasks people want and need to do. Students revisited the conceptual model weekly to discuss how they were integrating specific content topics with the model. In asking this question, fieldwork educators may have students reflect on how clearly they articulated to the client the link between an evaluation or intervention and the client’s desired occupations, or how clearly the link between occupational therapy services and return to occupation is documented in the students’ evaluation, progress, and discharge notes. The fieldwork educator may ask the student to design “linking opportunities” that ensure that clients experience the links between intervention and their future occupational goals.

Instructional Processes as Non-Paradigmatic

The instructors in this case study used a variety of active instructional methods, including interactive lectures, lab exercises, class discussions, problem-based learning, and field experiences. However, the active learning methods in themselves did not inherently serve the end of constructing content in relation to occupation. Toward this end, the instructors paired active learning methods with additional classroom process such as interjecting orienting remarks, assigning contradictory readings, and structuring class content in particular sequences.

Educators promote instructional processes that are believed to help students construct knowledge and acquire qualities necessary for success in practice. Examples include learning through active engagement (Bennett, 2001; Griffiths & Ursick, 2003; Lederer, 2000), problem-based and case-based learning (Caterina & Stern, 2000; McNulty, Crowe, & Vanleit, 2004), learning through discussion (Crabtree, Royeen, & Mu, 2001), service learning, and confluent learning (Peloquin, 1996). The growing acceptance and prevalence of such learning processes in occupational therapy can, on the one hand, be considered evidence that an educational shift has occurred “away from a ‘received knowledge’ perspective in which learners were taught isolated skills by experts, to a ‘process oriented’ perspective in which students actively construct and reflect on knowledge related to the context in which it is used” (Cohn, Dooley, & Simmons, 2001, p. 70), that is, toward a constructivist paradigm of teaching and learning. Recognizing and embracing a widespread shift toward a constructivist paradigm seems vital. On the other hand, it can be problematic to assume that the enactment of specific instructional methods relates directly to the enactment of a constructivist or any other teaching paradigm. Brookfield and Preskill (1999) suggested that teaching methods in themselves do not represent any teaching paradigm but are used in ways that can serve any paradigm.

Implications for teaching. Teaching methods such as problem-based learning, lab, or discussion may involve active learning processes but not inherently represent a constructivist view of teaching and learning. Using such methods, students might, for instance, be actively engaged, but be actively engaged in learning how to duplicate techniques in simplistic fashion, or to reproduce long-held objectivist views of learning by actively replicating or imitating what the instructor knows or what other students or clinicians in the field know. Conversely, students seated in a lecture, not actively engaged physically or verbally, may
still be actively engaged in constructing knowledge and making sense of content for themselves. In short, lecture methods do not inherently serve an objectivist paradigm, nor do more active methods inherently serve a constructivist paradigm of teaching and learning. Although active learning has been a long-standing general framework for teaching and learning in occupational therapy, the questions, Active toward what? or What actions count as active? have not been carefully considered.

In designing courses and individual class sessions, instructors may ask, What processes or activities will I design to help students actively construct knowledge of, and a personal relationship with, the subject of occupation? For Kinesiology of Occupation, I designed a worksheet that students completed on a weekly basis. Because the worksheet asked students to relate three body structures they learned that week to three activities they enjoy, it served as a catalyst to construct knowledge of occupation from anatomy and to relate to occupation personally. Similarly, students identified how their own occupations were supported by particular body structures and how they would be challenged if those structures became impaired. Fieldwork educators may ask students to write a one-page occupational narrative on their clients, facilitate a “journal club” centered on the occupational performance needs of a client, reflect on theoccupations they would lose if they were in a given client’s shoes, or reflect on the array of knowledge they assembled to construct an intervention plan with a client. These learning activities prompt students to actively construct knowledge of and a personal relationship with occupation.

Social Dimensions of Learning

Educators have suggested social learning frameworks are best suited to prepare graduates for contemporary practices in occupational therapy. Some of these frameworks include cooperative learning, collaborative learning, experiential learning, self-directed learning, social learning theory, situated learning theory, and cognitive apprenticeships (e.g., Cohn et al., 2001; Hammel, Finlayson, Kielhofner, Helfrich, & Peterson, 2001; Nolinske & Millis, 1999). Each of these frameworks, like subject-centered learning, emphasizes the central roles that social context, active engagement, and knowledge construction play in learning. However, it is possible to adopt one or more of these frameworks with little attention paid to a core subject that can potentially demarcate and define the social learning. Social learning theory minus a core subject may foster teaching practices reflecting what Palmer (1998) called naïve constructivism, where it is assumed that students construct knowledge and develop stronger capacities for relating with others simply through participation in a self-directed assignment, or in a small group where they discuss an issue, solve a problem, work through a case, or develop a community project.

Additionally, some interpretations of social learning theories ask educators to set aside their expertise in order to tap students’ personal experience and self-direction. Educator expertise is sometimes portrayed as a barrier to students learning to construct knowledge for themselves. According to Palmer (1998), perceptions of the educator’s role can vary from “facilitator to co-learner to necessary evil” (p. 116). Examining teaching through the lens of a subject-centered framework helped reveal how educators can hold on to their own expertise and knowledge while honoring students’ prior experience and creating contexts in which students construct knowledge. For example, each instructor described in this article held on to her expertise. However, rather than use expertise to transmit knowledge to students, they used it to expose students to the literature on which their expertise was built; tell clinical stories; create experiences that linked content to a core subject and the curriculum design; craft discussion questions; craft content sequences to help shape student perspectives of what is more and less important; and introduce tension between simplistic understandings of practice skills and more complex, nuanced understandings of those skills.

Finally, some interpretations of social learning theories represent the social context as the immediate classroom context, resulting in an emphasis on group learning over solo learning. In this case study, instructors seemed to consider the social learning context as extending beyond the students in a particular class to include occupational scholars, interdisciplinary scholars, clients, and the instructors themselves. Through the lens of subject-centered teaching, it was as if they created an extended virtual learning circle in which these participants came together to engage in a “conversation.” This was accomplished through using professional and interdisciplinary literature, asking students to bring their personal and fieldwork experiences to bear on a given topic, inviting guest presenters, and offering their own understandings and critiques of a given topic and core subject. Each member of the invisible “circle,” whether student or seasoned occupational therapist or educator, whether physically present or present as the author of an article or chapter or the character in a story, made a contribution toward constructing understandings of human occupation and its relation to practice as a therapist. If the social learning context is defined beyond the immediate group of students in a class, then both group and solo learning activities, like reading and individual reflection, can be equally social.

Implications for teaching. Academic and fieldwork educators in occupational therapy often enter teaching roles because of their expertise in a given topic or practice area,
making it easy to assume that teaching involves disseminating to students information about that topic or practice area. Subject-centered education can remind instructors to ask, What processes or activities will I use to help students function as a community of knowers with this topic? and How will I use my own expertise as a member of the community? The instructors who participated in this case study, for example, led research seminars in which students read and critiqued the instructor’s scholarship, then generated new research questions of their own in an instructor’s line of inquiry. In so doing, students came to see that knowledge is incomplete and to see themselves as co-knowers who could participate in building knowledge. Teaching methods chosen may range from seminars to lectures to problem-based learning cases, from quiet individual reflection to large group discussions, from online formats to small face-to-face seminars. Regardless of the specific approaches, it is important to continuously reflect to students the expectation that they will experience a shift from receiving knowledge from authorities to crafting knowledge with a professional community in and for particular contexts. It is also important to reflect back to students when that shift is evident.

In conclusion, understanding occupational therapy education as subject-centered can shift the focus of learning beyond a specific topic or procedure, such as splinting, or conducting an interview using the Canadian Occupational Performance Measure (Law et al., 1998), or learning to advocate for legislative change. By conceptualizing teaching as creating subject-centered experiences for students, educators not only teach a topic or competency, but they also create opportunities in which students link each topic or competency to human occupation, foster a personal connection with the subject of human occupation, and take a seat as a co-knower in a larger community of professionals and scholars. Such “linking opportunities” in the classroom may help authenticate occupation-centered curriculum designs for students and result in the self-defining professionals Yerxa (1998) envisioned, who go on to create a future where occupational therapy practice maximally reflects the field’s core subject.

Future Research

Because of its congruence with occupation-centered curricula, subject-centered education has the potential to become an educational theory for occupational therapy from within occupational therapy. I suggest that further case study research, especially multiple case designs, be developed to explore each element of the subject-centered education framework in Figure 1. For example, studies focused on the core subject in the center of the diagram could explore how various occupation-centered programs understand and interpret the core subject(s) of their curricula, as well as how individual educators understand, interpret, and communicate to students the core subject(s) of their courses. Studies focused on the link between a given topic in a class and the core subject could further describe the “linking opportunities” that educators create for students. Studies targeting the personal connection between learners and the subject of occupation may interview students about their emotional engagement with the subject and how such a connection developed or failed to develop. Research focused on the circle of knowers who gather around the subject may explore the tensions educators experience balancing the roles of expert and co-knower with learners, or the self-perceptions of learners that have to transform in order for them to assume the stance of co-knower among colleagues. Because occupational therapy is a ripe context for studying subject-centered education, the results of these investigations could extend beyond the confines of the profession and become an opportunity to offer back to the field of education a better developed understanding of subject-centered learning in graduate professional education.

Limitations

The purpose and scope of this article was to highlight teaching practices that best represented subject-centered education in this study. By highlighting exemplars of the concepts and principles, I do not intend to imply that there were not inconsistencies and tensions in the teaching practices observed. In particular, faculty members sometimes struggled with the amount of time they talked in a class versus the amount of time the students spent dialoguing and engaging with the content. Additionally, subject-centered teaching was the lens that I as a researcher used to observe and understand classroom practices. Although the findings resulting from this perspective were grounded in the data and supported in a final member check with the participants, it was not the explicit language faculty members used to describe their teaching practices. Subject-centered teaching, as described here, was more implicit and underground in day-to-day classrooms, even as efforts to make the overall curriculum design explicit to students were numerous. Because this study focused entirely on the actions of faculty members, and because many subject-centered teaching practices were tacit and just part of the way faculty members were as educators, it is unclear how clearly students understood the expectations being placed on them. It is also unclear whether subject-centered teaching practices...
resulted in subject-centered thinking and practice among
students, although anecdotal stories of students’ post-
graduation activities would suggest that they did.

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Appendix

Guiding Questions and Suggestions for Designing Subject-Centered Learning

What processes or activities will I develop to explicitly link this course, class topic, or clinical experience to the subject of occupation to which it relates?

• Ensure that language and the visual layout of the syllabus associates the course and class topics with the core subject of human occupation.
• Interject comments reminding students of the subject to which a topic relates.
• Tell stories that illustrate the connection of the content to occupation.
• Sequence a topic/experience to represent its relationship to occupation.
• Select contradictory readings.
• Use inductively structured discussion questions.
• Create a visual representation of the course topics in relation to occupation and review it with students frequently.
• Ask students to create a visual representation of the topic/experience in relation to occupation.
• Create “linking opportunities” in lectures, labs, assignments, and class discussions.
• Weight assignments to communicate the importance of students’ creating links back to occupation.

Ask students to reflect on:
• Disconnects they experience between occupation and class topics or field experiences.
• How they would tighten the connections between what feels like loosely related topics/experiences.

Ask students to:
• Complete study guides that direct them to the links between a topic/experience and occupation.
• Create concept maps that illustrate how they understand the interconnections of course topics and human occupation.
• Read research that does not support the connection between a particular body function and occupational performance.
• Role play during lab practicals; grade how well students explain to the client how the activity links to an occupation the client wants to do.

What processes or activities will I design to help students connect personally to the subject?

Ask students to reflect on:
• Ways in which their occupations are an expression of agency, identity, and beliefs.
• Periods when occupations have transformed their beliefs and identities.
• Ways in which their occupations are co-constructions with their social contexts.

Ask students to:
• Create and illustrate an autobiographical occupational profile; relate results to the literature.
• Conduct and analyze a 7-day time-use study on themselves; relate results to the literature.
• Maintain an occupational journal that addresses the form, function, and meaning of key personal occupations.
• Watch movies through an “occupational lens” . . . identify occupation, adaptation, meaning, social contexts, and occupational deprivation in the film.

What processes or activities will I use to help students function as a community of knowers?

Ask students to reflect on:
• How an author helps them better understand the subject of occupation and how the author misses a connection to occupation that the students see.
• What knowledge they have co-created with their classmates and how the classroom process reflects how knowledge is created in the profession.

Ask students to:
• Support their ideas with references and explain that by so doing they are participating in a dialogue with a larger professional community.
• Answer a clinical question by synthesizing research, theoretical literature, and expert opinion. Highlight the role of community in how the question was answered.


