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Hats On! A Teaching Innovation to Make Theory Visible in Professional Reasoning

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Abstract

Students often find learning and applying theory difficult and potentially disconnected from practice. Using theory to guide occupational therapy assessment and intervention preserves the distinct value of occupational therapy. One way students develop professional reasoning is by learning how to use theory. Theoretical knowledge guides the professional reasoning questions that students and practitioners seek to answer. Teaching occupational therapy theory needs to involve clear, engaging, and meaningful activities that foster an explicit focus on occupation. This paper presents an innovative way of teaching theory in occupational therapy. We explain a thinking cap analogy to organize the theoretical knowledge that guides professional reasoning. This analogy involves the instructor wearing a hat as a thinking cap to represent an occupation-centered model of practice on which objects (frames of reference) can be added as flair. We describe the thinking cap analogy in detail and how this analogy builds on Ikiugu's framework for combining theoretical conceptual models. Multiple years of student course feedback demonstrate the usefulness of this analogy as a teaching innovation. This method for teaching theory can advance how students use theoretical knowledge to guide professional reasoning in practice and value occupation, performance, and participation as central to occupational therapy.

Keywords

Theory, model, frame of reference, clinical reasoning, teaching and learning

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Hats On! A Teaching Innovation to Make Theory Visible in Professional Reasoning

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ABSTRACT

Students often find learning and applying theory difficult and potentially disconnected from practice. Using theory to guide occupational therapy assessment and intervention preserves the distinct value of occupational therapy. One way students develop professional reasoning is by learning how to use theory. Theoretical knowledge guides the professional reasoning questions that students and practitioners seek to answer. Teaching occupational therapy theory needs to involve clear, engaging, and meaningful activities that foster an explicit focus on occupation. This paper presents an innovative way of teaching theory in occupational therapy. We explain a thinking cap analogy to organize the theoretical knowledge that guides professional reasoning. This analogy involves the instructor wearing a hat as a thinking cap to represent an occupation-centered model of practice on which objects (frames of reference) can be added as flair. We describe the thinking cap analogy in detail and how this analogy builds on Ikiugu's framework for combining theoretical conceptual models. Multiple years of student course feedback demonstrate the usefulness of this analogy as a teaching innovation. This method for teaching theory can advance how students use theoretical knowledge to guide professional reasoning in practice and value occupation, performance, and participation as central to occupational therapy.

Introduction

Theory is essential for guiding occupational therapy professional reasoning throughout assessment and intervention (Ikiugu et al., 2009; Schell, 2019). While evidence-based practice is emphasized in occupational therapy education, Ikiugu and Smallfield (2015) cautioned that evidence without theory is "a hollow pursuit" (p. 165). Using theory to guide the occupational therapy process preserves the distinct value of occupational therapy through the explanation of one's rationale. Effectively teaching theory with application to practice can be one way to bridge the gap between education and practice (Moores et al., 2022; Smallfield & Milton, 2020).

Scholars define different categories of theory within occupational therapy literature. For example, Miller and Schwartz (2004), building on Mosey's (1981) work, delineated models that encompass all of occupational therapy practice from frames of reference for specific populations or issues. Ikiugu et al. (2009) aligned with Kielhofner's (2009) definition of a conceptual model of practice as an umbrella term for theoretical knowledge. Cole and Tufano (2020) proposed another categorization that combines aspects of Mosey (1981) and Kielhofner's (2009) work to distinguish paradigms, occupation-based models, and frames of reference.

For the purposes of this paper, we use theoretical knowledge categories of occupation-centered models, theories, and frames of reference. Occupation-centered models, such as the Model of Human Occupation (MOHO; Taylor, 2024) or the Person-Environment-Occupation-Performance (PEOP; Baum et al., 2015) model, illustrate the domain of occupational therapy, are applicable to all occupational therapy practice, and explain occupational issues, their causes, and how to address them. Frames of reference may come from inside or outside occupational therapy and are the most specific type of theoretical knowledge. They are used with certain populations to assess and address particular situations. Frames of reference provide the most detailed assessment and intervention guidance and are necessarily narrow in focus. Sensory Integration or Cognitive Disabilities are examples of frames of reference because they address specific populations or conditions and have assessment strategies and intervention principles that create change. Theories, such as social learning theory or Bronfenbrenner's ecological systems theory, are broad explanations of interrelated concepts that can provide general guidance for how to create change and often form the theoretical basis for models and frames of reference.

In practice, occupational therapy practitioners apply multiple combinations of theoretical knowledge when working with a client. Therefore, practitioners and students need mechanisms to combine theoretical knowledge. Ikiugu's eclectic framework for combining theoretical knowledge proposes the use of organizing and complementary models of practice (Ikiugu, 2007; Ikiugu et al., 2009). Organizing models serve to guide evaluation, goal setting, and overall organization of intervention while complementary models provide additional assessment instruments and specificity in intervention strategies. In Ikiugu's framework, any theoretical knowledge can be selected as the organizing model of practice (Ikiugu, 2007; Ikiugu et al., 2009).

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Best practices in course design can be used as guides to develop courses and course content about occupational therapy theoretical knowledge. A recent systematic mapping review of occupational therapy educational literature revealed limited research on teaching theory (Heeb et al., 2020). The topic of theoretical knowledge frequently takes a back seat to other course topics, and only 11% of papers in occupational therapy educational literature reference theory (Heeb et al., 2020). Fink (2013) described a process for creating significant learning by considering what students should know about the topic years after the course has ended. Additionally, Hooper et al. (2020) described a subject-centered, integrated approach to teaching and learning in which effective teaching and learning happens “on the lines” (p. 4) that connect the core topic to each course topic, each course topic to other course topics, each learner and their personal experiences to the core topic, and each learner to their community of learners. To apply these concepts to teaching theory, instructors need to create memorable learning experiences that connect key concepts and provide tools for future practice.

In order for students and practitioners to use and organize theoretical knowledge effectively, instructors need to teach it as relevant and useful to guide professional reasoning. Professional reasoning involves the use of theoretical knowledge, and using theory to guide practice is especially important for the novice practitioner who has limited practical experience (Schell, 2019). Students often find learning and applying theory difficult and potentially disconnected from practice (Davis-Cheshire et al., 2019; Moores et al., 2022; Roberts et al., 2017). Feldhacker and Feldhacker (2022) asserted a course about occupational therapy theory needs to be active and meaningful to learners. We propose it also needs to be clear, engaging, and focused on occupation to promote enduring learning.

The use of tangible objects and analogies are two strategies for increasing clarity and engagement in learning to promote enduring learning. Tangible objects, often referred to as manipulatives, are commonly used to teach mathematics concepts and, especially when used long-term, have been found to promote enduring learning (Laski et al., 2015). Likewise, physics concepts are also often taught with the use of digital materials such as videos and animations that connect mathematical concepts to reality (Bouchée et al., 2022). Similar to the use of tangible objects in math and science education, analogies have long been used in computer science and other educational programs to support learning (Dilber & Duzgun, 2008).

The purpose of this paper is to describe the use of a theoretical thinking cap analogy with tangible objects to teach professional reasoning in occupational therapy to promote enduring learning. We argue the intentional use of this innovative teaching method led to a course through which students learned to value occupation and use theory to inform professional reasoning.

Innovation Description

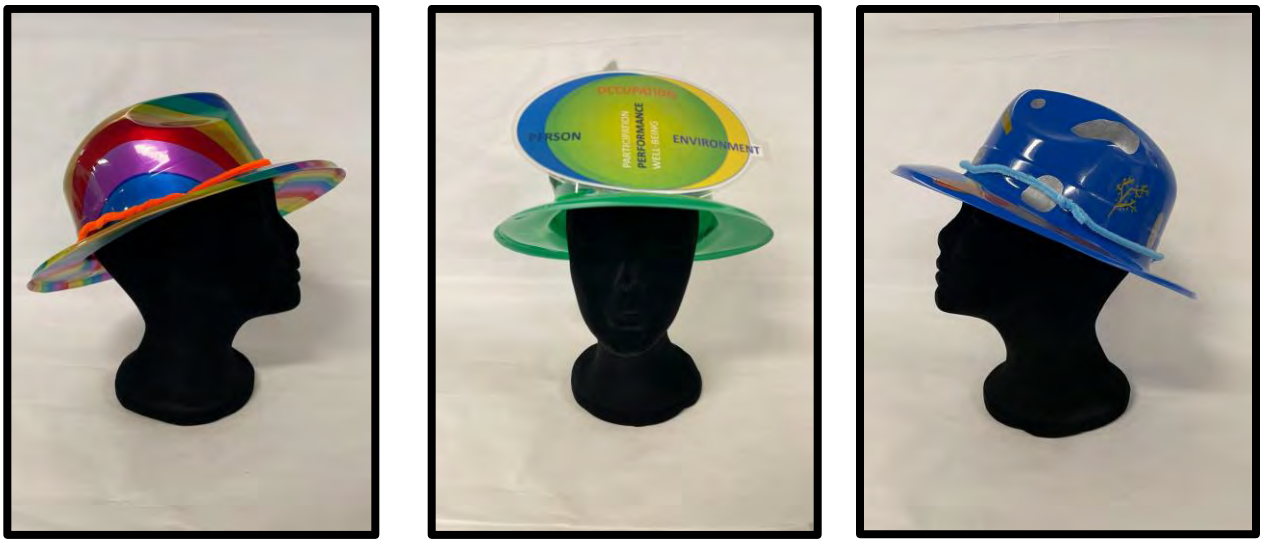
The teaching innovation described in this article is a thinking cap (i.e., a hat) that represents an occupation-centered model. Our adaptation of Ikiugu’s framework (Ikiugu, 2007; Ikiugu et al., 2009) requires that the organizing model be an occupation-centered

model to emphasize occupation as the core subject of occupational therapy described by Hooper et al. (2020). Additional flair placed on the hat depicts frames of reference or theories (complementary models of practice in Ikiugu's framework). The physical objects and analogy serve as concrete representations of abstract concepts. The "thinking cap" analogy is useful to explain how practitioners use theoretical knowledge to guide their thought process. This analogy and objects provide a tangible way for students to make connections between existing knowledge and new knowledge. It makes theory visible as part of one's professional reasoning.

While teaching, the instructor wears a hat that represents an occupation-centered model (e.g., PEOP, Baum et al., 2015; MOHO, Taylor, 2024; Kawa, Teoh & Iwama, 2015). Each occupation-centered model is represented by a separate hat. Wearing the hat explicitly illustrates how this occupation-centered theoretical knowledge serves as a thinking cap to guide one's professional thinking. Making the occupation-centered model the organizing theoretical knowledge (hat) emphasizes the centrality of occupation as described by Hooper and colleagues (2020). For example, when a student asks a question about a particular occupation-centered model, the instructor may need to change the hat that they are wearing so that it is apparent to the student that the ensuing discussion corresponds to that particular thinking cap. See Figure 1 for examples of occupation-centered model hats.

Figure 1

Occupation-Centered Model Hats



Note. Left: Model of Human Occupation (Taylor, 2024) hat representing an aspect of the instructor's occupational identity; Middle: Person-Environment-Occupation-Performance (Baum et al., 2015) hat with image of model; Right: Kawa (Teoh & Iwama, 2015) model hat with image of river, riverbank, rocks, and driftwood (image of model). Photos by Anahi Alcoser Bravo.

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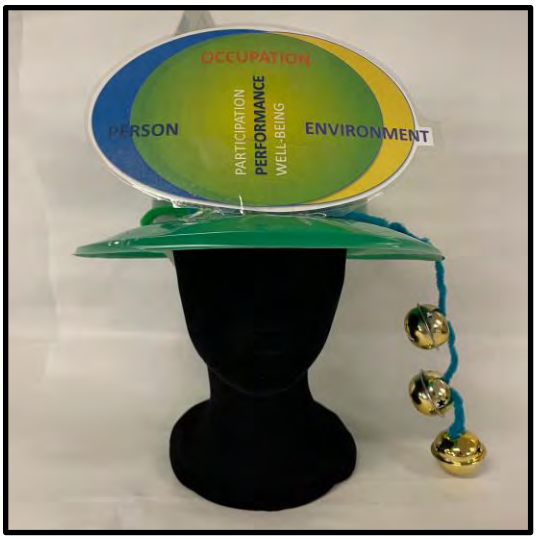
When teaching specific theories or frames of reference (e.g., biomechanical, lifespan development, ecological systems), the instructor continues to wear a hat to emphasize the importance of organizing one's thinking with an occupation-centered model. The instructor adds flair to the hat (similar to a tassel on a mortar board at graduation) representing the complementary theoretical knowledge (i.e., theory or frame of reference) to illustrate the relationship of the new knowledge to the occupation-centered model. In this system, we do not distinguish between theories and frames of reference because the emphasis is on how to use the theoretical information rather than definitions of theoretical knowledge categories. See Figure 2 for an example of a PEOP (Baum et al., 2015) hat with behavioral frame of reference flair.

Figure 2

PEOP Model Hat with Behavioral Frame of Reference Flair



Note. Photo by Anahi Alcoser Bravo.

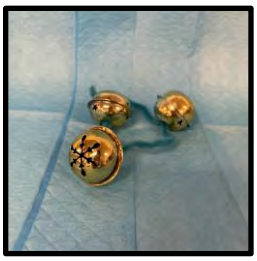
It is important to note that when using the theoretical thinking cap analogy, the sequence of course topics is critical. At least one of the occupation-centered models needs to be taught before any of the theories or frames of reference are taught. It may seem logical to start with the biomechanical frame of reference or developmental theories with which students may have prior exposure. However, starting with an occupation-centered model of practice maintains the centrality of occupation and provides an occupational therapy structure on which to scaffold this related knowledge.

Low-cost options are available to implement this teaching innovation. The course instructors made the theoretical thinking caps and flair used in the classroom. Discount and party stores have inexpensive plastic hats and objects for flair (see Table 1). Pipe cleaners can serve as a hat band and attachments for flair. The hats can be personalized to reflect how an occupation-centered model applies to each individual. The added benefit is that instructors can design their hats to reveal personal

characteristics, i.e., the MOHO (Taylor, 2024) hat can include elements of one's occupational identity. This builds rapport with students and serves as a method of making connections among the community of learners (Hooper et al., 2020).

Table 1

Select Theoretical Knowledge and Representative Flair

Theories or Frames of Reference	Example Object for Flair	Photo of Example Object
Rehabilitation	Long handled shoe horn (or other adaptive equipment)	
Biomechanical	Skeleton arm	
Lifespan development	Doll on a swing (gray hair added as lifespan reminder)	
Behavioral	Bells	

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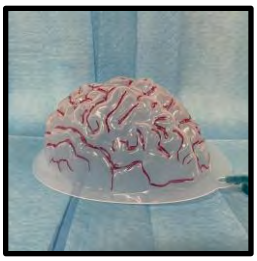
Social learning	Army figures working together	
Cognitive behaviorism	Brain gelatin mold	
Lawton's environmental press	Hamburger press	
Bronfrenbrenner's ecological systems theory	Infant toy with interlocking rings	

Note. Photos by Anahi Alcoser Bravo.

An essential aspect of teaching occupational therapy theory is how to *use* it in practice, which involves application in the classroom. The hat and flair emphasize how theory informs one's thinking in practice and involves more than memorizing terminology. Case examples may include video or written cases of individuals, groups, or populations. When introducing theoretical knowledge application, it can be helpful to keep a case short and focused. Consider the following case example used to introduce PEOP (Baum et al., 2015), based on a client with whom one of the instructors worked:

> *Maria is a 35-year-old woman who lives with her husband and 2 sons, age 18 months and 3 years. They have a lot of extended family living nearby. They primarily speak Spanish at home. Her 18-month-old son Ben is receiving occupational therapy services through Early Intervention. Maria reports that changing Ben's diaper has been really difficult for a long time. Ben "wiggles like a*

> *worm" when he's on the changing table, and Maria is afraid he is going to fall off. Maria had some recent health issues and she is not supposed to pick up anything over 10 pounds. She's worried how she can care for her children, especially changing Ben's diaper without picking him up.*

This initial case example only includes information about one occupation (diapering) to scaffold the learning activity and require the students to focus on one occupation. Further, by keeping the case short and deliberately not providing all the necessary information, students have to use the occupation-centered model (their thinking cap) to formulate professional reasoning questions, a key skill for theory use in practice.

Innovation Assessment

We used two types of data to assess the effectiveness of this thinking cap innovation, 1) assessment of student performance in the course; and 2) assessment of instructional design.

Assessment of Students

One way in which students are assessed on their understanding and use of theory in the course is through a case application assignment. Every class session in which theoretical knowledge was taught includes application to at least one case; students practice using theoretical knowledge for evaluation and intervention in each class session. At the end of the semester, students select one of two occupational therapy video-based cases and apply theory by using an occupation-based model and one frame of reference or theory specific to the case. The students analyze the case according to the occupation-based model and then identify assessment tools and intervention strategies consistent with the occupation-based model and their selected complementary theoretical knowledge. They design an intervention session to exemplify the theoretical intervention strategies. In preparation for a class discussion of their completed assignment, the students construct an actual hat with flair that represents the theoretical knowledge used.

Assessment of Instructional Design

In addition to assessing student application of theory use in practice, we also assessed effectiveness of the instructional design and content delivery using the hat analogy. Anonymous course evaluations from 2019-2021 served as the primary source of data for this assessment. Students are asked to complete the optional end of course evaluation outside of structured class sessions via an electronic survey platform provided by the university. Most course evaluation items are standard across all courses; however, instructors are given the opportunity to add up to three course-specific evaluation items. We obtained Institutional Review Board (IRB) approval for this educational research (#202204110).

To analyze course evaluations, we calculated descriptive statistics including average scores and score ranges. In 2020, we added two course-specific questions related to course objectives to assess how much the course helped students value key concepts taught in the course. Table 2 includes descriptive statistics from course evaluation data.

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Table 2

Course Evaluation Data

Course evaluation item	Mean rating % satisfied or very satisfied n satisfied or very satisfied/total of respondents			
	2019	2020	2021	Total
Promoting engaging, motivating, and thought-provoking class sessions	4.31 89.2% 58/65	4.63 98.5% 64/65	4.50 89.1% 57/64	4.48 92.3% 179/194
Clarity of presentations	4.23 86.2% 56/65	4.74 98.5% 64/65	4.33 84.4% 54/64	4.43 89.7% 174/194
Teaching effectiveness	4.18 84.6% 55/65	4.49 89.2% 58/65	4.44 85.9% 55/64	4.34 86.6% 168/194
Answering questions and explaining concepts	3.88 71.9% 46/64	4.54 90.8% 59/65	4.19 81.3% 52/64	4.20 81.3% 157/193
Instructor-developed course evaluation item (added in 2020)	Mean rating % agree or strongly agree n agree or strongly agree/total of respondents			
	2019	2020	2021	Total
This course helped me to value occupation, performance, and participation as central to occupational therapy	-	4.81 100% 64/64	4.69 95.3% 61/64	4.75 97.7% 125/128
This course helped me to recognize occupation, performance, and participation as essential to health and well-being	-	4.85 100% 64/64	4.75 96.9% 62/64	4.80 98.4% 126/128

Note. The satisfaction scale ranges from 1-5, with 1 = very dissatisfied and 5 = very satisfied. The agreement scale ranges from 1-5, with 1= strongly disagree to 5 = strongly agree.

We used qualitative content analysis of student suggestions for course improvement from the end of semester course evaluation. In 2019, the first year the analogy was introduced at this program, we asked students for general "even better if" suggestions for course improvement. We received mixed reviews of the helpfulness of the analogy as a teaching and learning strategy. Students made comments that only briefly introducing the hat was less helpful for learning. One student stated, "I think the hats were a good tool for visualization but turned into being too funny and joke–like, which resulted in being a distraction to my learning." The following year (2020), based on the feedback in 2019, we wore the hat throughout the class session, taught synchronously via Zoom. For example, when one instructor was teaching, the other instructor was wearing the corresponding hat. That year, we received no "even better if" suggestions related to the use of the hat analogy. In 2021, instructors included an additional course evaluation question about what aspects of the course best supported their learning. One student noted, "I also thought the PEOP hat was super helpful. The visual aspect definitely sparked a few 'a ha' moments for me."

We have received anecdotal feedback about the usefulness of the hat analogy to promote enduring learning. When theory came up during a discussion in another class the following semester, a student referred to having their theory hat in their backpack. Another student reflecting on preparation for Level II fieldwork specifically named the theory hats and flair as one of the ways she remembers and uses theory. A recent graduate retrieved a photo of their theory hat from their smartphone in a conversation about learning theory with one of the course instructors.

Discussion

This paper describes an innovative method, namely a thinking cap analogy with tangible objects, to make theory visible in professional reasoning in occupational therapy. Applying theoretical knowledge in occupational therapy practice is difficult for students to understand. It is not intuitive, easy, or straightforward. It involves not only learning the vocabulary of each different model or theory or frame of reference, but also how to apply it with clients and in combination with other theoretical knowledge.

Using theory requires explicit and deliberate practice. For this reason, we use an actual hat to represent occupation-centered theoretical knowledge and actual physical objects to represent theories and frames of reference (complementary models) while applying the theoretical knowledge to case examples. These manipulatives, in combination with case application, make the abstract concept of theory tangible, relatable, and usable.

This thinking cap analogy builds on current literature regarding theory use in occupational therapy. It is consistent with the subject-centered integrated learning model (Hooper et al., 2020). The subject of the theory course is occupation. By using a physical hat to represent an occupation-centered model we are "teaching on the lines," making connections between the subject of occupation and each "theory". The representation of an occupation-centered model of practice with a hat, in combination with the representation of theories or frames of reference with flair, make the connection

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between types of theoretical knowledge obvious. Learners make connections with each other through case application class activities, including making, bringing, and wearing their own hat when discussing their case application assignment. We are not providing a physical object so they have the answer and know what to do; rather we give them a physical object to understand and make connections between the topic (the theoretical knowledge that is being covered that day) and the central subject (occupation).

In addition to being consistent with Hooper's (2020) subject-centered integrated learning, this method for teaching occupational therapy theory builds on Ikiugu's framework (Ikiugu, 2007; Ikiugu et al., 2009; Ikiugu & Smallfield, 2015). Wearing the hat with associated flair provides a physical representation of Ikiugu's (2007) framework for combining theoretical conceptual models with one important distinction- that the organizing model be occupation-centered to ensure that one's professional reasoning centers on occupation. We demonstrate this concept to students when they can see that "flair" cannot be worn as a hat. In other words, theoretical knowledge that is not centered on occupation should not be used in isolation from occupation-centered theoretical knowledge. Likewise, only one occupation-centered model of practice should be used at one time (i.e., we can only wear one hat at a time). Ashby et al. (2017) illustrated the importance of using occupation-centered models and additional specific theoretical knowledge to organize one's professional reasoning. Occupational therapists in mental health settings had difficulty expressing their distinct professional expertise when they focused on using psychological frames of reference other professionals were also using (Ashby et al., 2017). However, using a combination of an occupation-centered model with psychological frames of reference enhanced their services.

At first glance, this method for teaching theory may appear juvenile or frivolous. However, using a thinking cap analogy with physical objects is not simply a cute thing that helps a student learn the terminology of each theory, and if it is treated in this way, it is less effective. Using a thinking cap analogy provides a visual image of the professional reasoning to guide how we understand each practice situation. Instructors wear the hat while interacting with cases in class to bring the abstract into view and demonstrate how to use theoretical tools to further evaluate the situation and create change. In other words, using a thinking cap ensures that learners use theory, not simply know about theory. We are not focused on practicing the language; we are explicitly using theoretical knowledge with cases. Wearing the hat throughout the class does seem to make a difference. The first time we taught this course together, one of us put on the hat briefly at the beginning of class and then set it down on the table. That year, the analogy did not stick as much with students; the hat did not come up as much in conversations with students, and it is possible that they did not necessarily remember the analogy. The following year, we wore the hat during the entire class session, which led to more connections, more comments, and more enduring learning.

One limitation of this work is the evaluation of the effectiveness of the theoretical thinking cap analogy. To date, we have relied primarily on course evaluation data. Student course evaluations primarily focus on student experience and satisfaction rather than enduring learning. Our course evaluation data did not directly assess the effectiveness of the innovation, but rather the course as a whole. We have relied on the standard course evaluation items rather than creating a customized evaluation.

Conclusion and Implications for Occupational Therapy Education

Occupational therapy educators can use this theoretical thinking cap analogy to assist students in understanding and using theory in practice. Using physical objects to represent abstract concepts can clarify muddy points and aid in the transmission and use of the content. Based on this work, we strongly encourage instructors to wear theoretical thinking caps when teaching occupational therapy theory. Theory is often taught early in an occupational therapy curriculum when the occupational therapy domain and process is still quite new and emerging for students. This timing further supports the need for effective teaching and learning strategies to promote enduring learning throughout the curricula and into professional practice.

References

Ashby, S., Gray, M., Ryan, S., & James, C. (2017). An exploratory study into the application of psychological theories and therapies in Australian mental health occupational therapy practice: Challenges to occupation-based practice. *Australian Occupational Therapy Journal*, *64*(1), 24–32. https://doi.org/10.1111/1440-1630.12302

Baum, C. M., Christiansen, C. H., & Bass, J. D. (2015). The person-environment-occupation-performance (PEOP) model. In C. H. Christiansen, C. M. Baum, & J. D. Bass (Eds.) *Occupational therapy: Performance, participation, and well-being* (4th ed., pp. 49-55). SLACK Incorporated.

Bouchée, T., de Putter-Smits, L., Thurlings, M., & Pepin, B. (2022). Towards a better understanding of conceptual difficulties in introductory quantum physics courses. *Studies in Science Education, 58*, 183-202. https://doi.org/10.1080/03057267.2021.1963579

Cole, M., & Tufano, R. (2020). *Applied theories in occupational therapy: A practical approach* (2nd ed.). Slack, Inc.

Davis-Cheshire, R., Davis, K., Drumm, L., Neal, S., Norris, E., Parker, M., Prezzia, C., & Whalen, C. (2019). The perceived value and utilization of occupational therapy models in the United States. *Journal of Occupational Therapy Education, 3*(2). https://doi.org/10.26681/jote.2019.030211

Dilber, R., & Duzgun, B. (2008). Effectiveness of analogy on students' success and elimination of misconceptions. *Latin-American Journal of Physics Education, 2*(3), 174-183. http://www.lajpe.org/sep08/03_Refik_Dilber.pdf

Feldhacker, M. L., & Feldhacker, D. R. (2022). Active learning and occupational therapy theory: A mixed methods study of a course redesign. *Journal of Occupational Therapy Education, 6*(4). https://doi.org/10.26681/jote.2022.060403

Fink, L. D. (2013). *Creating significant learning experiences, revised and updated: An integrated approach to designing college courses*. Jossey-Bass.

Heeb, R., Hooper, B., & Taff, S. D. (2020). Representation of theory in occupational therapy education: An international systematic mapping review, 1940-2015. *Journal of Occupational Therapy Education, 4*(4). https://doi.org/10.26681/jote.2020.040401

Hooper, B., Molineux, M., & Wood, W. (2020). The subject-centered integrative learning model: A new model for teaching occupational therapy's distinct value. *Journal of Occupational Therapy Education, 4*(2). https://doi.org/10.26681/jote.2020.040201

Ikiugu, M. N. (2007). *Psychosocial conceptual practice models in occupational therapy: Building adaptive capability*. St Louis, MO: Mosby.

Ikiugu, M. N., Smallfield, S., & Condit, C. (2009). A framework for combining theoretical conceptual practice models in occupational therapy practice. *Canadian Journal of Occupational Therapy, 76*(3), 162-170. https://doi.org/10.1177/0008417409076003

Ikiugu, M. N., & Smallfield, S. (2015). Instructing occupational therapy students in use of theory to guide practice. *Occupational Therapy in Health Care, 29*(2), 165-177. https://doi.org/10.3109/07380577.2015.1017787

Kielhofner, G. (2009). *Conceptual foundations in occupational therapy* (4th ed.). F.A. Davis.

Laski, E. V., Jor'dan, J. R., Daoust, C., & Murray, A. K. (2015). What makes mathematics manipulatives effective? Lessons from cognitive science and Montessori education. *SAGE Open, 5*(2). https://doi.org/10.1177/2158244015589588

Miller, R., & Schwartz, K. (2004). What is theory and what does it matter? In F. Ludwig & K. Walker (Eds.), *Perspectives on theory for the practice of occupational therapy* (3rd ed., pp. 1-26). Pro-Ed.

Moores, A. V., Dancza, K. M., Turpin, J. M., & Copley, J. A. (2022). The nature of theory used in practice education: A scoping review. *Canadian Journal of Occupational Therapy, 89*(3), 261-282. https://doi.org/10.1177/00084174221093466

Mosey, A. C. (1981). *Occupational therapy: Configuration of a profession*. Raven Press.

Roberts, M. J., Fitzgerald, D., & Molineux, M. (2017). Educating occupational therapists in the use of theory and evidence to enhance supervision practice. *Open Journal of Occupational Therapy, 5*(4). https://doi.org/10.15453/2168-6408.1356

Schell, B. A. B. (2019). Professional reasoning in practice. In B. A. B. Schell & G. Gillen(Eds.), *Willard and Spackman's occupational therapy* (13th ed.; pp. 482-497). Wolters Kluwer.

Smallfield, S., & Milton, L. (2020). Bridging the gap between entry-level education and the demands of clinical practice. In S. Taff, L. Grajo, & B. Hooper (Eds.), *Perspectives on Occupational Therapy Education: Past, Present, and Future* (pp. 55-62). Slack Incorporated.

Taylor, R. R. (2024). Introduction to the model of human occupation. In R. R. Taylor, P. Bowyer, & G. Fisher (Eds.), *Kielhofner's Model of Human Occupation: Theory and application* (pp. 1-8). Wolters Kluwer.

Teoh, J. Y., & Iwama, M. (2015). *The Kawa Model made easy: A guide to applying the Kawa Model in occupational therapy practice* (2nd edition). www.kawamodel.com