

Foundations for Learning: Epistemic and Ontological Cognition of  
Occupational Therapy Students

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Occupational therapy (OT) educators face many challenges and potential obstacles as they guide students in the learning process. Among these may be students' beliefs about knowledge and knowing, or epistemic and ontological cognition (EOC). EOC has been empirically linked to persistence in problem solving, the ability to solve problems with more than one potential solution, metacognitive skills, learning, and academic performance (Bråten & Strømsø, 2005; Greene, Torney-Purta, & Azevedo, 2010; Schoenfeld, 1983; Schommer, Crouse, & Rhodes, 1992). Students with naive EOC may prefer experts as sources of knowledge (Mifflin, Campbell, & Price, 1999) and demonstrate negative emotional reactions to assignments which require the use of multiple sources of evidence to reach logical conclusions (Hammel et al., 1999). Despite this, little research has been done to examine the EOC of OT students. The purpose of this study is to describe similarities and differences between entering and post-didactic students' EOC.

Greene et al.'s (2010) Model of Epistemic and Ontological Cognitive Development defines epistemic cognition as beliefs about the means of justification of knowledge (e.g., by accepting the word of authority figures, by personal experience, or by logic). In terms of ontological cognition, some individuals see knowledge as certain, unchanging, simple, and discrete, while others view knowledge as evolving, complex, and integrated. Greene and colleagues classify individuals as holding different EOC positions: realist, dogmatist, skeptic, or rationalist. The realist strongly agrees that knowledge is simple and certain and accepts authority figures or personal experience as justification for knowledge claims. The other three positions have weak agreement with the simple and certain ontological dimension and are differentiated by the epistemic cognition dimensions. Skeptics tend to justify knowledge claims through personal experience or logic, dogmatists through authoritative sources, and rationalists through either or a combination of the two sources, depending on the context.

In this study, 54 OT students, 21 incoming and 33 post-didactic, completed the Epistemological Beliefs Inventory and the modified Four-Quadrant Scale (mFQS) and provided explanations of self-ratings on the mFQS and responses to four open-ended questions. MANOVA results indicated that post-didactic students held significantly more sophisticated stances on OT-specific knowledge than incoming students. Based on an analysis of themes from the narrative data, entering students demonstrated dogmatist and skeptic perspectives, with minimal evidence of a rationalist view of knowledge. Among the post-didactic students, there was evidence of primarily skeptic stances, with the emergence of rationalist views. Understanding students' EOC could assist in selecting educational methods and techniques and in remediating learning struggles. If gaps exist between the EOC of incoming students and the EOC which support effective OT practice, educators need to work toward bridging those gaps.

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