# COGNITIVE APPRENTICESHIP TO SUPPORT TRANSFORMATION IN A DOCTORAL PROGRAM

*A POSTER PRESENTATION*

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*EXTENDED ABSTRACT*

Doctoral programs can intentionally promote transformation in the learners who are enrolled. In our work with doctoral students, we have studied, and sought effective ways to support, the transformation from student to full-fledged scholar (Swanson, et al., 2015). A cognitive apprenticeship (CA) (Collins, 2006; Collins, Brown, & Holum, 1991) framework provides a lens for thinking about how best to support students' journeys. Our doctoral program employs a cohort model, with up to 15 students taking courses together over three years; most students take time beyond that to complete dissertations. Using the CA model, and based on data and feedback from students over a four-year period, we have adjusted assignments, course content, course sequence, and the kind of support provided for dissertation research and writing.

Transformation is critical to learning in adulthood (Mezirow, 1991; 2006), enabling learners to recognize and re-examine the organization of assumptions that structure their thinking, feeling and behaviors. The goal of transformative learning through critical reflection is to develop in adult learners "a crucial sense of agency over ourselves and our lives" (Mezirow, 1981, p.20). It is through looking back and filtering through those perspectives of meaning that we come to assimilate new viewpoints and understandings. One central element of transformative theory that arose in our work with doctoral candidates is the concept of a disorienting dilemma. Disorienting dilemmas typically initiate the transformative learning process (Mezirow, 1991; 2006). For our students, disorienting dilemmas are most often triggered by feedback or its absence. Feedback, which is a form of *coaching* in CA (Collins, 2006), is often also instrumental in resolving these dilemmas.

Cognitive apprenticeship provides a framework whereby mentors or peers make explicit the intellectual work they do so that learners can develop the skills and knowledge to become experts themselves. In a doctoral program, the mental work of doctoral scholarship has to be made discernible to the student/apprentices, and "the learning environment has to be changed to make these internal thought processes externally visible" (Collins, 2006, p. 48). Experts' cognitive processes are made visible to students through the methods of modeling, coaching, scaffolding, articulating/reflecting, and transferring/exploring. Although the application of these methods is not linear but recursive, the first three methods (modeling, coaching and scaffolding) are meant to fade as the apprentice moves into articulating/reflecting and transferring/exploring. Our work illuminates the critical role of coaching in the CA framework. When doctoral candidates receive coaching in strategies to improve their skills and dispositions, they can tackle increasingly challenging tasks with confidence (Collins, Brown, & Holum, 1991).

Although a disorienting dilemma can occur in association with any of the methods of CA (modeling, coaching, scaffolding, articulating/reflecting, transferring/exploring), among our students, coaching is most commonly associated with disorienting dilemmas; the absence of coaching can also lead to a dilemma. We see this often, for instance, when students finish course work and must work independently on their research or dissertation writing. In either case, when the dilemma arises, students

eventually either seek/accept more coaching, or they do not do so. Those who do seek more coaching are more likely to work through the dilemma toward eventual transformation. Those who either reject coaching or do not seek it when a dilemma arises are more likely to become stuck in place rather than to move toward transformation.

Questions remain about CA and transformation. How can we determine the right amount of coaching to provide support needed for forward movement, while still encouraging learners toward transformation? Is peer coaching the same or somehow different from coaching by faculty mentors? When faculty mentors are the ones experiencing the disorienting dilemmas, how can cognitive apprenticeship work to help *them* move forward? As we continue to examine these questions, cognitive apprenticeship offers a useful way for understanding how disorienting dilemmas arise and how learners can be supported as they work through them.

## SELECT REFERENCES

Collins, A. (2006). Cognitive apprenticeship. In R. K. Sawyer (Ed.) *Cambridge handbook of the learning sciences* (pp. 47-60). Cambridge, UK: Cambridge University Press.

Collins, A., Brown, J. S., & Holum, A. (1991). Cognitive apprenticeship: Making thinking visible. *American Educator, 6*(11), 38–46.

Mezirow, J. (1981). A critical theory of adult learning and education. *Adult Education, 32*(1), 3-24.

Mezirow, J. (1991). *Transformative dimensions in adult learning*. San Francisco: Jossey-Bass.

Mezirow, J. (2006). An overview of transformative learning. In P. Sutherland & J. Crowther (Eds.), *Lifelong learning: Concepts and contexts* (pp. 24-38). New York: Routledge.

Swanson, K. W., West, J., Carr, S., & Augustine, S. (2015). Supporting dissertation writing using a cognitive apprenticeship model. In C. X. Wang (Ed.) *Handbook of Research on Scholarly Publishing and Research Methods* (pp. 84-104). Hershey PA: IGI Global.

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