Chapter 31
Optimizing Conditions for Learning and Teaching in K–20 Education

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ABSTRACT

A long debate in education has been whether to separate the study of children's pedagogy from the study of adults' andragogy or whether it is better to bring the two under one umbrella. In this chapter, the authors propose a third, and hopefully, more fruitful view. Their contention is that in order to understand teaching and learning, one needs to examine the conditions or contexts under which teaching and learning occur. Thus, the goal is to address the question "How does one optimize the conditions for all learners and, by the same token, optimize the conditions for all teachers?" Understanding conditions or contexts helps one to view learning and teaching as part of a larger whole. Contexts affect people, resources, place, and time. This position goes beyond the "fixing" of an individual learner, whether child or adult, and an individual teacher. In this chapter, the authors discuss the following: a) optimizing conditions for all learners and b) optimizing conditions for all teachers. They do so by framing the discussion around several key principles from educational psychology, learning sciences, and adult education.

OVERVIEW

Our libraries' bookshelves show the physical divide between adult education (andragogy) and children's education (pedagogy) and we see this schism in the way, as educators we structure our education courses. Professors with degrees in adult education teach andragogy, while those specializing in child and adolescent development or educational psychology teach pedagogy. This latter term is from the Greek words paid, meaning "child" and agogus meaning "leader of." Thus, pedagogy has come to mean the art and science of teaching children (Knowles, 1973). Pedagogy evolved in the monastic schools of Europe between the 7th and 12th centuries. Elementary schools gradually became more commonplace during the late 18th and 19th centuries and they taught children basic skills. When educational psychologists like Geraldine Holmes and Michele Abington-Cooper began scientifically studying learning around the turn of the 20th century, they limited their research mostly to the reactions of children and animals to systematic instruction. This reinforced a problematical pedagogical model that envisaged teachers as the holders of knowledge as well as being responsible for making decisions about what would be learned, how it would be learned, and when it would be learned (Knowles, 1980).

The early 1920s marked the rise of adult education, and the teachers of adults noticed similar problems with the pedagogical model. One main problem was that adult learners found it difficult when faced with a steady regime of lectures and memory work, which had the effect of pacifying rather than energizing their minds and spirits (Knowles, 1980). Hence, educators needed another model of teaching and learning. In 1833, German teacher Alexander Kapp,

coined the term *andragogy*, but never gained momentum. However, by 1921, the term had reappeared in Europe, and during the 1960s, France, Holland, and Yugoslavia used the term extensively (Davenport, 1987). A Yugoslavian adult

educator in the mid-1960s introduced Knowles to the term *andragogy*. He then developed his definition of andragogy, which was a parallel to pedagogy. Andragogy is a Greek word *aner* with the stem *andra* meaning "man, not boy" or adult, and *agogus* meaning "leader of." In an effort to emphasize the differences between the education of adults and children, Knowles defined the term as "the art and science of helping adults learn." He made no reference to gender (Davenport, 1987). For Linderman, the emphasis for teaching adults was a commitment to a self-directed, experiential, problem-solving approach to adult education (Davenport, 1987).

However, cognitive-development theorist Jean Piaget and social-cognitive theorist Lev Vygotsky have recognized for decades that children (and learners in general) are the central figures in their own learning. This understanding stretches back as far as the 19th century. Moreover, contemporary researchers and educators from educational and cognitive psychology, and the learning sciences embrace a constructivist and social constructivist position of teaching and learning for *all* learners. The basic premise in constructivist and social constructivist approaches to teaching and learning is that all learners (regardless of being a child or an adult) are inquirers. In other words, all learners learn and contribute to the advancement of knowledge and practice when they are in contexts that engage them in both individual and joint problem solving, analysis, reflection, and insightful construction of meaningful issues and problems. For young learners this may involve observing the wonders of nature. As adults, they may be faced with the urgent issue of how to deal with the damaging effect of a massive oil spill on life at all levels. Moreover, constructivists and social constructivists contend that each individual learner has her or his own internal factors (e.g., age, prior knowledge, beliefs, motivation, affect) and external factors (political, economic, cultural, historical) that influence how they carve and pattern their worlds. Furthermore, we know

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