Chapter 3

Instructional Dynamic and Flexible Strategy: Integrity of Effective Activities for Engaging All Learners in Classrooms

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ABSTRACT

Globalization, Anthropology, and Existentialism (GAE) is a philosophical paradigm of PreK–12 education that adds value to a new educational ideal: professionalism, planetary thinking, and cultural pluralism. Critical pedagogy constitutes a part of this philosophy, which describes the interdependencies between teaching, learning, and environmental assessment. By comparing the Freirean approach to the affordance of new educational technologies in everyday classrooms, the authors propose an instructional dynamic and a flexible strategy. Such a strategy proves the changing roles of teacher and learner during the learning process. This chapter aims to describe the instructional dynamic and flexible strategy as integral to teaching and learning and to evaluation methods that engage learners in classroom cognitive activity. The objective of the chapter is to investigate the transition from algorithmic to empirical methods, encouraged by the increasing role of self-regulation techniques. This presents insights into the perceived significance of the new learning strategy.

INTRODUCTION

Critical thinking and critical pedagogy are ubiquitous in contemporary theories of learning. Byrne (2011, p. 53) notes that for Freire, respect for the process of education lies in thinking critically. Such thinking recognizes not only the possibility of making a new choice, but also the right to do so. This right to explore without judgment or limitation was the foundation for Freire’s pedagogy of freedom (1998). Goodman (1992, p. 51–52) observed that critical theory in education is about liberating, enlightening, emancipating, and empowering. While Cho (2010, p. 311) theorized that critical pedagogy has to transform the knowledge (e.g., curriculum) and pedagogy (in a narrow sense, i.e., teaching). The most significant focus of critical pedagogy is the relationship between knowledge and power. By asserting that knowledge is intrinsically interwoven with power, critical
pedagogy dismisses the mainstream assumption that knowledge is objective and neutral. Critical pedagogy “values the dynamic and always unfinished interplay among text, citizen-student, and other” (Ott & Burgchardt, 2013, p. 14). It is like “a prism that reflects the complexities between teaching and learning. It is a prism which sheds light on the hidden subtleties that might have escaped our view previously” (Wink, 2005, p. 26). However, the challenges of metasystems learning design specific to a learning environment are worth examining. By metasystems learning design we mean a specification for a metalanguage which enables the modeling of learning processes. The learning process is considered any sequence of interdependent and linked procedures of cognitive systems which consume resources (time, didactic material, tool for learning etc.) to convert input (a priori knowledge) into output (educational outcomes) through continuous series of actions taking place in an observable behavior.

This chapter takes a metasystems view of this challenge. Our central question concerns the evidence of dynamic and flexible instructional strategy for critical thinking. Can the principles of metasystems learning design for electronic textbooks be used for all pedagogical strategies common to the global learning environment? What factors form learner-centric perspectives in a global learning environment? Our examination, then, is from the learning perspective of preK–12 students, although from a self-regulation rather from an education point of view. The objective in learning to engage all learners in the classroom is to develop knowledge, skills, and attitudes that result in better adaptation and accommodation in different learning environments. We focus on applying metasystems thinking, or specifically information/communication, cognitive and computerized assessment. Our concern is what matters to the learning designer who must consider cross-curricula activities.

This chapter is organized into a background section and three main sections. The background covers some norms of design for the learning environment as well as principles of metasystems learning design. These principles for dynamic and flexible instructional strategy require an understanding of what an integrated structure of competence is. The first main section considers relevant aspects from the savoir–vivre integrated structure of competence as a totality of learning strategies, procedures, and methods. The section covers the fidelity question as it relates to user cognitive experience. The second section reviews relevant strategies for learning activities, drawing from behavioral and cognitive psychology to constructive philosophy. The intention is to recognize these contributions from psychology and determine what they can offer for dynamic and flexible instruction strategy. The third section attempts to unite the concepts from the first two sections and from metasystems methodology in order to argue the role of immediate and delayed feedback in critical pedagogy.

The objectives of this chapter are to establish a framework for the many factors for successfully implementing instructional and dynamic flexible strategy. The value of the proposed strategy is to demonstrate the role of dynamic teaching, learning, and evaluation methods for engaging all learners in classrooms. The main concept is metacognition, defined as cognition about cognition. I use only one component: regulation of cognition.

My working hypothesis is that critical pedagogy and critical thinking methods are more effective when learning design is based on a metasystems approach. These theories and methods require new principles and meta-analysis of algorithmic and empirical methods, which give evidence for self-regulation in the learning process.

BACKGROUND

In the past century, researchers have made significant progress in understanding the definition of critical thinking and of the correlation between critical thinking and cognitive style (Ennis, 1985; Paul, 1995; Facione & Facione, 1995).
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