

# Education as Multiple-Source Self-Regulation: A Wholetheme Perspective

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## Education as Single-Source Other-Regulation

Mainstream education in the U.S. and maybe around the globe continues to honor the assumption that *education is by nature other-regulation of learners by the teacher as the one and only source of knowledge and regulation*. This is true of educational systems favoring didactic instruction as well as those applauding learner-centered practices. Commonly, the other-regulator of learning, usually the teacher, writes the prescription; the learner swallows the pills of what and how to be taught or learn. Whereas this kind of education has had much going for it in the past, it is unlikely to serve us well in the rapid rate of change heading our way in the future. It is by no means the only way to educate; though it is taken for granted as the only way; perhaps because it is the only way we have ever known. How can cognitive science help?

## Cognitive Educational Science

The post-behaviorist cognitive revolution of the 1960s set the stage for putting the learner at the center. However, so far the only mainstream framework guiding education beyond the teacher-centered didactic approach has been the input-elaboration-output model of constructive internal-ization of outside information. Information processing constructivism (IPC) has envisioned the learner at today's highly controversial center; but it has also remained entirely loyal to the structures, processes, and methods of didactic instruction without committing itself fully to self-regulation processes enabling the learner to function at the center (Iran-Nejad, 2000; Iran-Nejad, McKeachie, & Berliner, 1990).

## The Challenge

Learner-centered IPC regards learners as active agents capable of participating in their own educational process intentionally and reflectively. The notion of active self-regulation of learning makes sense insofar as it goes; but it has not yet escaped the prison house of the single-channel input-elaboration-output processing of the IPC model. Moreover, IPC envisions learner or teacher self-regulation at the detached level of the whole person to observe and be observed by means of external input into the senses. Thus, even though many educators agree that schooling must push beyond teacher prescription or learner memorization and delve into the realms of critical reflection and problem solving, the latter processes are too deeply entrenched in the dynamic biological activity of the physical brain and bodily systems to be reachable by the single-source theory of learning as external knowledge internalization. Chief among entrenched sources are those having to do with the human

capacity for self-understanding and for understanding others through the self-reflective mirror of self-understanding.

## Wholetheme Education

In an as yet unpublished master's equivalency monograph, Iran-Nejad (1978) demonstrated that self-understanding processes are fundamentally different from both knowledge-of-the-world and knowledge-internalization structures and processes (Iran-Nejad, 1980; Iran-Nejad, 2000). Consider the statements (1) *I know that I drive a car even though I do not really know how to drive a car*, (2) *I know that I elaborate on what I hear or read even though I do not really know how to elaborate on what I hear or read*, and (3) *I know that I understand things even though I do not really know how to understand things*. These statements share the feature of all containing an assertion followed by its negation. However, strikingly, unlike the first two "knowing" statements, the third "understanding" statement is intuitively acceptable. Starting with that rather tentative beginning, subsequent follow-up research to be discussed in this presentation has resulted in the first ever comprehensive theory of how the brain and bodily systems function and how such a theory can enable us to view the nature and process of the educational enterprise from being one that is plagued with conduit metaphors of knowledge transmission to one that views learners as being the regulators of their own educational process through the lens of education as multisource learner self-regulation (Iran-Nejad & Gregg, 2001; Iran-Nejad & Pearson, 1999; Iran-Nejad, Wittrock, & Hidi, 1992).

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