Unit 3
Theories for Different Outcomes of Instruction

Unit Foreword

In unit 2 we reviewed a number of promising approaches to instruction. This unit addresses different kinds of learning outcomes that have usefulness for deciding what methods to use. It is important to understand that while these different learning outcomes have distinct identities, they are not wholly separate. They can overlap or be used in the service of one another in similar fashion to approaches.

We distinguish this orientation from Bloom's traditional learning outcomes distinctions of affective, psychomotor, and cognitive because we understand most learning outcomes, not just skills, to include all three components, and there is powerful evidence that all learning has a significant affective component (see chapter 12). While each learning outcome has elements of all three of Bloom's domains, each also has its own identity, which calls for a different galaxy of instructional methods.

Chapter 10 addresses skills learning, which was developed, historically, very early. Alex Romiszowski defines skills instruction as the ability to perform a task at a given level of mastery. He clearly differentiates skill from knowledge, saying that knowledge is a go-no go quantity, whereas skills develop gradually with experience. Among the most important messages communicated in this chapter is the notion that skilled performance requires both knowledge and skill. Learning to perform a skill requires very different methods from other kinds of learning, such as developing understandings or emotional development. Skills instruction requires generalizing, and this, in turn, requires a variety of demonstrations and practice in order to generalize sufficiently to diverse situations. Thus, the basic stages in skills learning are first, to acquire knowledge of what should be done; second, to execute the actions; third, to transfer control from the eyes to other senses; fourth, to automate the skill; and finally, to generalize the skill. This leads to specific steps in skills instruction, which: (1) impart basic knowledge, (2) impart basic skill, and (3) develop proficiency. We feel that skills instruction is necessary to include here because skills are essential for almost all tasks. Intellectual skills, metacognitive skills, and physical skills are essential building blocks for reading, writing, and arithmetic. Skills are necessary for

higher-order thinking and a variety of job performances. Skills are ultimately what enable us to do almost all things, and as such are among the most important kinds of learning

In chapter 11 Stone Wiske and Brian Beatty distinguish learning for understanding as a performance capability, not merely a possession of some knowledge (our more colloquial idea of understanding). Learning for Understanding is made up of five elements: generative curriculum topics, explicit understanding goals, a rich sequence of performances of understanding, ongoing assessment, and collaborative, reflective communities. We see understanding as a critically important kind of learning that is receiving increased attention, as there is more and more need for deep understandings in the information age, a period of increasing complexity and dynamism. Because learners are encouraged to apply their learning to real situations in creative ways, this outcome is particularly well-suited to the information age. We also agree with Wiske and Beatty that recent advances in information technologies are making the teaching for understanding framework more realistic than it has been in recent past.

In chapter 12, emotional development is defined by Barbara Bichelmeyer, James Marken, Tamara Harris, Melanie Misanchuk, and Emily Hixon as a sub-topic of the broader affective domain of learning that is fundamental to all affective learning. We agree with Daniel Goleman's primary argument that emotional intelligence is more important to success in life than is intellectual intelligence. This kind of learning is crucial for addressing social problems such as drug abuse, violence, teen pregnancy, and even international conflicts. In society, emotional development can serve our systems as well by helping us to understand what is fair, equitable, and socially just. There are five universal principles of instruction for emotional intelligence: use stories, teach the language of emotion, model the skills of emotional intelligence, take time to deal with emotions, and provide active and integrated experience to foster emotional competence.

In chapter 13, theme-based instruction is defined by Brian Beatty as thematically unified learning across various domains of learning. We believe that integrated learning replicates real life in which domains are indeed integrated and present themselves as complex mixtures of many domains often centered on a particular theme. Thus, we agree with Beatty that theme-based instruction is a more natural way of learning and is certainly reflective of more natural ways of performing. Skills, understandings, and emotional development are all bundled together in real-life learning; and math, science, English, history, literature, and social studies are all relevant to real-world problems or situations. The whole is more than the sum of its parts and therefore learning each domain individually is not sufficient. Learners also need to understand the relationships between domains, such as math and science. There are five universal principles of thematic instruction: use a unifying theme, focus instruction on primary learning goals, use a variety of instructional activities, provide useful instructional resources, and evaluate achievement through authentic assessment. In the real world things

are integrated and thus, they should be taught that way. Beatty also makes the point that theme-based instruction improves learning and is widespread, with a variety of examples at all levels of education.

We have not included psychomotor or physical skills as a separate learning outcome because we found that it has a tremendous amount of overlap with cognitive skills, and therefore there is a great deal of overlap in the methods as well. There certainly are other kinds of learning outcomes that we have not addressed here, such as memorization. Due to space limitations, again, we were unable to include the full variety of learning outcomes that exist, but we do encourage other theorists and researchers to contribute to a common knowledge base for these other outcomes as well.

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