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1

Toward Renaissance Curriculum

An Idea Whose Time Has Come

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Parker and Rubin (1966) elaborate on the distinction between process and content knowledge in education. They describe content as

the compendium of information which comprises the learning material for a particular course of a given grade. Content, in short, is the rhetoric of conclusions to be transferred to the student.

Process, in contrast, refers to all random or ordered operations which can be associated with knowledge and human activities. There are a wide variety of processes through which knowledge is created. There are also processes for utilizing knowledge and for communicating it. Processes are involved in arriving at decisions, in evaluating consequences, and in acquiring new insights. (p. 2)

Many schools today tend to teach, assess, and reward the acquisition of content and convergent thinking with a limited range of acceptable answers. Life in the real world, however, demands multiple ways to do something well. Understanding the process-content dynamic requires a fundamental shift in

perceptions of what learning, teaching, and schooling are about. It is a shift from valuing right answers as the purpose for learning to knowing how to behave when we *don't* know answers—knowing what to do when confronted with those paradoxical, dichotomous, enigmatic, confusing, ambiguous, discrepant, and sometimes overwhelming situations that occur throughout life. It requires a shift from valuing knowledge *acquisition* as an outcome to valuing knowledge *production* as an outcome. The intent is to embark on the human quest for continual improvement—to have a lifelong passion to continue learning, to lend oneself to new experiences, and to greet the necessity for learning a new skill, understanding, or attitude with openness and eager anticipation.

Processes may be thought of at three levels: *skills*, *operations*, and *dispositions*.

- *Skills* are discrete and include such mental functions as comparing and classifying as well as behaviors such as listening, asking questions, catching a ball, and multiplying fractions.
- *Operations* are larger strategies employed through time. Operations require and include clusters of numerous skills. For example, *communicating* may be considered an operation composed of such verbal and nonverbal skills as attending, paraphrasing, clarifying, questioning, monitoring body language, and making eye contact.
- *Dispositions* are habits of mind, inclinations, proclivities, and characterizations. Unlike skills, they are never fully mastered but rather are attitudes that seem to characterize the human will: having a questioning attitude, persevering when an answer is not immediately known, and being willing to change one's mind in light of new information.

In addition, there are five states of mind: the invisible, internal human energy forces or passions that motivate and drive human will. They give rise to and fuel dispositions, operations, and skills (Costa & Garmston, 1994).

What Are the Processes?

Without getting too hierarchical, we believe that the skills enable the operations, and the operations, performed through time, are habituated into the dispositions. The performance and growth in those dispositions are determined by the balance and strength of internal drives, forces, or passions. Taken together, they constitute what is meant by processes and can become the objectives, outcomes, purposes, and mechanisms of instruction and curriculum. Process skills and behaviors are explained in Resource 1 at the end of this chapter.

According to Barry Beyer (1996), Edward de Bono (1991), and Reuven Feuerstein (1991), these skills may need to be taught directly to students who have not learned how to use them or who do not comprehend the acts of performing these skills. Few people simply go out and observe, compare, and synthesize. These skills, then, are engaged within a larger context. They are the skills used to perform the operations needed to respond to the stimulus.

Therefore, if they are taught directly, they should be transferred, bridged, or linked to life situations that call for their performance (see Swartz & Parks, 1994). For example, the operation of decision making involves the skills of generating alternatives, exploring consequences, making predictions, comparing and contrasting, considering temporal dimensions, prioritizing, considering alternative points of view, and so forth. A more complete, but not final, list of operations can be found in Resource 2 at the end of this chapter.

Dispositions

The dispositions are characteristics that teachers and parents can teach and observe. Following is a list of 13 attributes or character traits (from Costa, 1991) providing the third level of the process goals. As with the previous lists, this list is not meant to be complete.

Persistence: Persevering When the Solution to a Problem Is Not Readily Apparent

Efficacious people stick to a task until it is completed. They don't give up easily. They are able to analyze a problem and develop a system, structure, or strategy to attack a problem. They have a range of alternative strategies for problem solving. They collect evidence to indicate their problem-solving strategy is working; if one strategy doesn't work, they know how to back up and try another. They recognize when a theory or idea must be rejected and another employed. They have systematic methods of analyzing a problem that include knowing how to begin, knowing what steps must be performed, and knowing what data need to be generated or collected.

Decreasing Impulsivity

Effective individuals have a sense of deliberativeness: They think before they act. They intentionally form a vision of a product, plan of action, goal, or a destination before they begin. They strive to clarify and understand directions, develop a strategy for approaching a problem, and withhold immediate value judgments about an idea before fully understanding it. Reflective individuals consider alternatives and consequences of several possible directions prior to taking action. They decrease their need for trial and error by gathering information, taking time to reflect on an answer before giving it, making sure they understand directions, and listening to alternative points of view.

Listening to Others—With Understanding and Empathy

Highly effective people spend an inordinate amount of time and energy listening. Some psychologists believe that the ability to listen to, empathize with, and understand another person's point of view is one of the highest forms of intelligent behavior. Being able to paraphrase another person's ideas, detecting indicators (cues) of the other's feelings or emotional states in oral and body language (empathy), and accurately expressing another person's concepts,

emotions, and problems—all are indications of listening behavior (Piaget called it “overcoming egocentrism”). They gently attend to another person, demonstrating their understanding of and empathy for an idea or feeling by paraphrasing it accurately, building on it, clarifying it, and giving an example of it.

Metacognition: Awareness of Our Own Thinking

Metacognition means that humans are conscious of our actions, plans, strategies, behaviors, feelings, and values. It means installing a plan of action before beginning to solve a problem, determining if that plan is working or if it should be discarded and another plan employed, and evaluating the strategy to determine its efficacy or a more efficient approach. It means being able to describe the strategies, steps, and sequences employed in the problem-solving process—transforming into words the visual images held in the mind. Humans plan for, reflect on, and evaluate the quality of their own thinking skills and strategies.

Metacognition means becoming increasingly aware of one’s actions and the effect of those actions on others and on the environment, forming internal questions as one searches for information and meaning, developing mental maps or plans of action, mentally rehearsing prior to performance, and monitoring those plans as they are employed. It involves being conscious of the need for midcourse correction if the plan is not meeting expectations, reflecting on the plan on completion of the implementation for the purpose of self-evaluation, and editing mental pictures for improved performance.

Striving for Accuracy and Precision

People who value accuracy, precision, and competence take time to check over their products, review the rule by which they are to abide, review the models and visions they are to follow, review the criteria they are to employ, and confirm that their finished product matches the criteria exactly. They take pride in being craftsmen and have a desire for accuracy as they take time to check over their work. They are concerned with precision, clarity, and perfection.

Craftspeople communicate accurately in both written and oral form—taking care to use precise language, defining terms, and using correct names and universal labels and analogies. They spontaneously develop criteria for their own value judgments and describe why they think one product is better than another. They speak in complete sentences, voluntarily provide supporting evidence for their ideas, and can elaborate, clarify, and operationally define their terms in a concise, descriptive, and coherent manner.

Questioning and Problem Posing

One of the distinguishing characteristics between humans and other forms of life is our inclination and ability to *find* problems to solve. Effective problem solvers know how to ask questions to fill in the gaps between what they know and what they don’t know. Effective questioners are inclined to ask a range of questions, for example, requests for data to support others’ conclusions and assumptions—such questions as, “What evidence do you have?” or “How do you know that’s true?”