

The Way I See It

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We're Over-Challenging Students

We have developed vertical curriculums and learning challenges that are unrealistic in terms of the actual thinking capacity of great numbers of students. Our methods, curriculums, instructional materials, and expectations have programmed built-in failure experiences for countless youngsters.

Brain growth periodization research confirms that 85 to 90 percent of all youngsters of average and above average ability experience brain growth spurts at some point during the ages of 2-4, 6-8, 10-12, and 14-16+ (Epstein, 1978; Epstein and Toepfer, 1978; Toepfer, 1981). Plateaus in brain growth occur for a similar percent of that population during 4-6, 8-10, and 12-14 age intervals.

Between 12 and 14 years of age, mental age growth averages only about seven months (Shuttleworth, 1939). School achievement during that period (grades 7 and 8) has been low for the past 50 years. The Epstein data suggest that youngsters during the age span of 12-14 may be over-challenged by teaching strategies that insist on movement to higher thinking levels. Indeed, a recent study I conducted found that 80 percent of the students who first experienced poor achievement between the ages of 12 and 14 never improved on that achievement pattern in their remaining years in school (Toepfer, 1981).

Consolidation of thinking skills initiated during the age 10-12 brain growth period should result in more effective learning during the age 12-14 plateau interval. Unfortunately, contemporary practice fashions a poor fit of thinking capacity to learning ability during that period.

"If at first you don't succeed, try, try again" does not apply when the challenge is offered at a level grossly beyond the thinking level of a student. When learners who were largely "cando" achievers due to the appropriateness of the level of learning challenge are later expected to succeed at levels

far beyond their capacities, failure and disappointment are assured. Such youngsters sooner or later give up, experiencing serious self-doubt.

We can design programs that emphasize improved learning of facts and information by consolidating existing levels during plateau periods. The vertical curriculum has been built on the myth of a continuum of brain growth. In developing learning expectations that respond to the profile of growth and plateau intervals, we may develop responsive curricular sequences.

No "back-to-basics" rhetoric can overcome the realities of what seems ordained—that the mind progresses through discrete levels of development. This is not to say that we can't create more appropriate challenges and higher levels of success. But, we must begin to identify the levels at which children can reasonably be expected to function at specific ages.

Piagetian research has provided the elementary school with an ample range of testing instrumentation against which curriculum materials and classroom strategies can be assessed. We need to make use of available tests of reading readiness to counteract the practice of beginning reading instruction for students who do not exhibit true readiness. We must be responsive to these youngsters' needs and stand up against the insistence that all students can read earlier. It is important to communicate that children in the 4-6 age range can learn through means other than reading and that lack of reading readiness does not mean lack of readiness to learn.

At all levels, but especially in the middle and high school grades, schools must take the initiative to test and identify thinking levels and modes. Tests showing progress from onset through maturation of concrete operations as well as readiness to move to formal operations must be used. Middle grades and high school curriculums and materials also must be evaluated in light of thinking levels and mental operations required for successful learning.

From a Piagetian perspective, Elkind (1981) has found that secondary school curriculum materials that seem simple actually require mental operations and thinking levels that many students are not yet able to perform. Educators may feel they can do little about the thinking levels written into curriculum materials; textbooks are published by huge companies and schools must choose from what is available. But while publishers are understandably cautious about major changes, experience shows they inevitably give us what we demand.

With the realities of Epstein's research, refinement of Piagetian data, validation of data on hemispheric brain development, and confirmation of research in teaching and learning styles, our profession verges on curriculum planning that can attain responsive specificity not previously available. The elusive goals of curriculum planning for teaching, thinking, and learning obligate us to press forward against our most severe critics. ■

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