

The Research Brief



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Diverse Learners and Higher Level Thinking in Cognitive, Affective, and/or Psychomotor Domains

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"Diversity is the one thing we all have in common." -Anonymous

Question In what ways can educators lead diverse learners to higher level thinking in cognitive, affective and/or psychomotor domains?

Summary of Findings

Transforming Learning Situated Within

Diversity in a Changing World

When discussing ways in which people learn (learning styles and domains), educators invariably refer to the levels in Bloom's Taxonomy (Bloom, 1956). Bloom developed a classification of progressive objectives and skills essential to learning. These learning objectives are divided into three domains; (a) *the affective domain* (Krathwohl, Bloom, & Masia 1964) which represents the attitudes or feelings the learner should have; (b) *the psychomotor domain* (Simpson, 1972), which represents what the learner should be able to do; and (c) *the cognitive domain* (Bloom et al., 1956) which represents what the learner should know. For over 50 years, these objectives have been used to build lesson frameworks, direct learning, and assess learner performance. Nevertheless, even Bloom's Taxonomy underwent transformation in recent years to reflect 21st century teaching and learning. Bloom's Revised Taxonomy (Anderson & Krathwohl, 2001), reflects two noticeable changes: (a) the six categories in the original changed from nouns to verbs, and (b) the list is slightly rearranged (see Figure 2.)

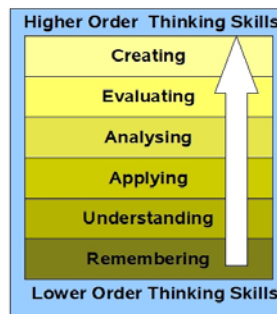
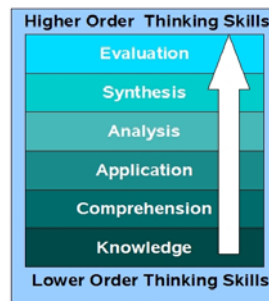


Figure 2. Original Bloom's Taxonomy (up) vs. Bloom's Revised Taxonomy (down.) Copyright 2007 by A. Churches, Kristin School. Reprinted with permission.

The progression from lower order thinking skills to higher order thinking skills allows for scaffolded learning to occur, thus increasing the likelihood for all learners to achieve higher order thinking skills. Additionally, Clark (2002) provided a cognitive taxonomy circle based upon Bloom's work to facilitate active learning which may apply to all grade levels through postsecondary.

The Research Brief provides a synthesis of research on current educational or counseling issues. Each brief is authored by graduate faculty and/or graduate candidates in the College of Education at Sam Houston State University.

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Higher Level Thinking and Responsiveness to Diversity

As cognitive higher order thinking skills should be integrated into the curriculum, many of the 21st century skills required today should encompass diversity responsiveness. Educators must be able to support and nurture the learning of diverse populations of students (Banks, Smith, Moll, Richert, Zeichner, Page, Darling-Hammond, Duffy & McDonald, 2005). Learners have been, and continue to be, diverse in many ways—especially in how they acquire knowledge. Unfortunately, schools have not been particularly supportive of these diversities in the past, thus widening the achievement gap among children. Fortunately, the 21st century curriculum demands that all educators be prepared to support the “different experiences and academic needs of a wide range of students” (p. 233) through an acute awareness and positive support of academic, social, cultural, and language variations.

Therefore, taxonomies such as Bloom’s Original and Bloom’s Revised (among a host of other taxonomies) guides educators in instructional design and support for cognitive higher level thinking, the 21st century curriculum should further encompass certain critical attributes which support academic, social, cultural and language diversity:

- integrated and interdisciplinary
- globalization
- 21st century skills
- relevant, rigorous and real-life
- project-based & research-driven
- student-centered
- technologies & multimedia

Tying It All Together

As the needs of the world change, a trickle-down effect of changes will assuredly occur. Given that society today is undoubtedly information/inquiry/decision-based, the resulting skills required to successfully compete in the global society have thus also changed to reflect society’s current position. For education as a whole, these changes must occur at all levels - in schools, in the approaches used to educate, and in the curriculum. Once these paradigmatic shifts occur in all realms of education, educators can expect to see higher level thinking from learners situated in a deep appreciation for all diversities.

Additional Resources:

Educational Origami, Bloom’s and ICT Tools - This website contains a wealth of information on Bloom’s Revised (and digital) Taxonomy and 21st century learning including: the 21st century learner, educator, learning spaces, instruction, pedagogy, assessment, diversity, and learning styles. Additionally, you will find diagrams, rubrics, and lessons which are useful when developing a course.

21st Century Skills (Trilling & Fadel, 2009) - This important resource introduces a framework for 21st Century learning that maps out the skills needed to survive and thrive in a complex and connected world. 21st Century content includes the basic core subjects of reading, writing, and arithmetic-but also emphasizes global awareness, financial/economic literacy, and health issues. The skills fall into three categories: learning and innovations skills; digital literacy skills; and life and career skills. This book is filled with vignettes, international examples, and classroom samples that help illustrate the framework and provide an exciting view of what twenty-first century teaching and learning can achieve.

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