

Thinking in Classrooms

Poster Abstract

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Brief Description

Communication is the basis for all relationships. A student and a teacher must master this art of communication in order to be successful in the teaching-learning-experience. Without the opportunity to think at higher cognitive levels, students cannot engage in these processes.

In order to assess what students are thinking in class and measure the level that professors teach higher-order thinking, four professors and scholars from the Pennsylvania Governor's School for the Agricultural Sciences were randomly selected for this study.

In 1950s Benjamin Bloom developed a system for organizing thinking skills, which is commonly called Bloom's Taxonomy. According to Bloom (1956) there are six main levels of cognition: knowledge, comprehension, application, analysis, synthesis, and evaluation. Bloom's Taxonomy is a hierarchy in which each level of cognition must be mastered before it is possible to move to a higher level. In addition, the Florida Taxonomy of Cognitive Behavior (FTCB), created by Webb (1968), and based on Bloom's Taxonomy (1956), was used to measure the potential level of cognition reported by professors and the level of cognition reached by students during class.

Professors in this study taught 46% of the time at the knowledge level of cognition. On the other hand, the most common type of thought displayed by students in class was "nonsense or unrelated thoughts (46%). The least frequently utilized cognitive levels by professors were application (7%), analysis (8%), synthesis (9%), and evaluation (2%). In addition, students concentrated an average of 8% of their thoughts in class at the analysis level, 9% at the synthesis level, and 2% at the evaluation level. However, students reported 19% of their thoughts to be related with deeper learning or questioning attitude. Within that category of thought, students reported 40% (Analysis) of their higher-order thoughts.

Professors need to set goals at the start of class, reorganize material constantly, evaluate students and procedures, and focus on more analytical behaviors. Students, on the other hand, should discipline themselves to pay attention to class without being diverted by outside factors that may hinder their learning experience.

References

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