
The time is ripe for a closer examination of learning in college classrooms. Recent questioning of the value of higher education focuses on the worth of undergraduate education and on the quality of learning that takes place in college classrooms. In response, many colleges and universities have focused on changes that center on improving teaching and learning. In the past decade, we have seen a focus on teaching techniques in college classrooms, a movement that emphasizes active learning, the value of out-of-class learning, and the importance of assessment on college campuses. We have addressed the all-important issue of learning by college students without focusing on the all-important question of "how" our students learn academic material. One change that could begin to maximize students' learning would create "learning-centered" campuses (Barr and Tagg 1995). To create such a campus, we need to know how college students learn, to understand barriers to students' learning, and to develop classroom techniques that promote learning among college students. The keys to this knowledge lie in the fields of psychology, philosophy, and sociology; many have a basis in the study of children's learning and development, but we know much about the learning of youth and adults as well, particularly in academe.

WHAT THEORIES AND FRAMEWORKS ARE RELEVANT TO LEARNING IN COLLEGE?

Some of the many models of learning theories are particularly relevant to the traditional college classroom. For example, research shows that college students' attributions for success or failure (Weiner 1992) and their beliefs about their own abilities, or self-efficacy (Bandura 1997), influence students' motivation and goals for academic work. Moreover, some theories expand our view beyond the individual student and focus on the social context of learning. Approaches to learning that promote social constructivism, or learning within a social context, and that feature active group constructions of knowledge (Jaworski 1994) provide an ideal environment for some learners. Approaches to learning that create awareness of students' social conscience and that promote an awareness of possibilities for social transformation through action, such as conscientization (Freire and Faundez 1989), can stimulate learning, particularly for students from traditionally disadvantaged groups. And the theories of multiple intelligences (Gardner 1983) and learning styles (Kolb 1981) help us challenge time-worn assumptions about learners and learning that can exclude students and that limit our ways of thinking about the role of the college student in the classroom.
WHAT DO WE KNOW ABOUT COLLEGE STUDENTS' LEARNING?

Research tells us much about learning in college; for example, we know that students can develop realistic attributions regarding success and failure that lead to positive study behaviors when working with counselors. Researchers have also demonstrated that constructs related to self-efficacy are positively related to achievement. And in several instances, classes designed for low-achieving students that focused on developing self-efficacy as well as academic learning experienced dramatic successes. Social constructivist approaches to learning have been applied through classroom practices such as collaborative learning, problem-based learning, and peer learning groups. Most often, students who participate in these innovative instructional approaches perceive a more meaningful learning experience and in some cases actually learn more than students in conventional learning situations. Research on the application of Freire's theory of conscientization is more limited, and scholars are only beginning to apply the theory with nontraditional students and in ESL (English as a second language) courses. With regard to theories of learning styles and multiple intelligences, researchers have validated the existence of the various ways of learning and the existence of various types of intelligence. Many examples of ways to apply the theories in the classroom are available.

WHAT PRACTICES PROMOTE LEARNING AMONG COLLEGE STUDENTS?

From the literature focusing on frameworks and theories of learning, we can identify several general practices that promote learning for college students:

Social learning experiences, such as peer teaching and group projects, particularly those that promote group construction of knowledge, allow a student to observe other students' models of successful learning, and encourage him or her to emulate them (social constructivism, self-efficacy, learning styles); Varying instructional models that deviate from the lecture format, such as visual presentations, site visits, and use of the Internet (multiple intelligences, learning styles, self-efficacy); Varying expectations for students' performance, from individual written formats to group work that includes writing and presentation, interpretation of theatrical, dance, musical, or artistic work, and performance of actual tasks at a work site (attribution theory, conscientization, multiple intelligences, learning styles); Choices that allow students to capitalize on personal strengths and interests (self-efficacy, multiple intelligences, learning styles); Overt use of sociocultural situations and methods that provide authentic contexts and enculturation into an academic disciplinary community (social constructivism, conscientization); Course material that demonstrates valuing of diverse cultures, ethnic groups, classes, and genders (conscientization, learning styles).

Although it might be difficult or even impossible to incorporate all these practices into one college class, if most college classes could incorporate just a few of these elements, colleges would develop into more learning-centered communities and would move toward meeting the learning needs of a greater portion of their students.
WHAT ADDITIONAL QUESTIONS MUST BE ANSWERED?

Many important questions about college students' learning remain to be explored through research. Although we know that students' beliefs and attributions affect learning, we are not sure whether an instructor can apply techniques that will modify those beliefs and attributions to help students learn. And although literature exists to describe innovations in the classroom designed to foster learning using various models and theories, few authors have systematically tracked differences in learning across classes. Such research is needed to establish definitively the importance of these theories and models. Finally, differences in learning by gender and across racial subgroups need to be explored. Carefully designed studies employing both quantitative and naturalistic approaches are needed to help us learn more about these important topics.

REFERENCES


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