The process of having students engage in some activity that forces them to reflect upon ideas and upon how they are using those ideas. Requiring students to regularly assess their own degree of understanding and skill at handling concepts or problems in a particular discipline. The attainment of knowledge by participating or contributing. The process of keeping students mentally, and often physically, active in their learning through activities that involve them in gathering information, thinking, and problem solving. (dsm, bba)

Active learning is an educational approach in which teachers ask students to apply classroom content during instructional activities and to reflect on the actions they have taken. Teachers who employ active learning approaches can have students solve problems, work as part of a team, provide feedback to classmates, or peer-teach as ways to put new content to work. Active learning requires students to operate at high cognitive levels, to analyze, synthesize, and evaluate during instructional tasks. This entry looks at how active learning works and what research says about its outcomes, as well as some criticisms and challenges.

Method and Rationale

When students take notes quietly during a lecture, they are operating as passive learners. Lectures invite student passivity, and research shows that passive students learn less. Lectures are teacher-centered activities that require only the instructor to process the academic content. Active learning approaches, on the other hand, are student centered, requiring students to manipulate academic content during the lesson and placing the teacher in an advisory role. The bottom line in active learning is, in order to learn, students must do more than simply listen. With an active learning approach, teachers design instruction that invites students to take action and to reflect on the skills and/or the knowledge required to complete a task.

Active learning takes a variety of forms because no single application or set of strategies comprises an active learning approach. At a rudimentary level of instructional planning, instructors can ask students to discuss a question with a classmate or to compare notes with a partner during a break in a lecture. Of course, active learning applications can reflect more sophisticated planning as instructors ask students to perform a skit, respond to a case study, or otherwise apply classroom content.

With constructivism as a prevailing theoretical framework in schools, active learning is present in a variety of contexts, particularly in secondary and higher education settings. Biology, chemical engineering, and medical school classrooms are among the array of cross-disciplinary contexts where active learning is increasingly present. Technology affords new opportunities for active learning in classrooms. Wireless laptops hold the promise of increasing opportunities for student-centered lessons. A lecturer can invite students to problem solve independently or in small groups from their...
seats in the lecture hall, making a computer lab unnecessary.

A handful of well-known instructional approaches fall within the parameters of active learning. Cooperative learning, problem-based learning, and collaborative learning all require students to be the primary manipulators of content during a lesson. Active learning hinges on the consistent benefits of assigning students to small, collaborative groups for solving a problem.

Research Findings
Research on active learning has shown improved academic performance, or at least no evidence of diminished learning among students from active learning classrooms compared to students taught in traditional, teacher-centered contexts. Studies have also shown evidence of positive attitudes to active learning. Students who possess the attributes associated with active learning environments are very attractive to employers. These students exhibit improved team skills, as well as an ability to formulate questions and to devise unique solutions, traits that are not as prevalent in students from teacher-centered classrooms.

Teachers who have employed active learning approaches report better time management as well as increased opportunities to collaborate with others (teachers, administrators, and community members) in planning and delivering lessons. All in all, teachers who employ active learning approaches feel that the lessons they develop are more creative.

Critique and Challenges
Instructors are finding active learning approaches to be increasingly accepted and expected. Because active learning is student centered, it highlights the teacher’s role as a planner. Teachers seeking to remake their teacher-centered lessons will require time to revise their lectures into active learning scenarios. These teachers must create a climate to cultivate active students willing to take risks. In addition, teachers must develop their own repertoire of active learning strategies with which they are comfortable and that are effective for teaching the content in their content area.

That said, when an instructor designs active learning lessons, he or she may face criticism from colleagues who are rooted in a more traditional teacher-centered philosophy. Or, some students may resist active learning approaches. Having grown accustomed to being passive receptors of information in teacher-centered classrooms, students may balk at teachers’ requirements that require a greater responsibility from students for their own learning. Students may refuse to engage in higher order thinking or to function as members of a team.

In addition, even though the literature supports active learning as an effective way to increase student learning, teachers may not be receiving appropriate training to incorporate these methods. Active learning may not be the focus of sustained teacher professional development, or active learning approaches may not be being modeled during training sessions. Teachers who desire to create an active learning environment should spend additional energy devising the cooperative, risk-free climate in which students can work.

Students face concomitant adjustments in a classroom where active learning approaches are employed. Because the focus of active learning is less about transmitting a particular body of content and more about acquiring operational skills and cognitive abilities, students may feel unsure about whether they are receiving all the essential information about a subject that they believe they need.
See also
Constructivism; Cooperative Learning

Further Readings

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