



REACTing to Learn: Student Engagement Strategies in Contextual Teaching and Learning

Cognitive science confirms that students' engagement in the learning process increases significantly when they understand why concepts are important and how those concepts can be used in real-world contexts. The mind naturally seeks meaning in context by searching for relationships that make sense and appear useful. The *contextual teaching* approach builds upon this idea while affirming that learning is a complex and multifaceted process.

Contextual learning theory encourages educators to select learning environments and instructional materials that incorporate authentic activities. In such an environment, students discover meaningful relationships between abstract ideas and practical applications in the context of the real world.

Curricula and instruction based on contextual learning strategies should be structured to encourage five essential engagement strategies: **Relating**, **Experiencing**, **Applying**, **Cooperating**, and **Transferring**. In light of learning research these strategies seem natural, but as instructors we cannot take

it for granted that students are aware of the strategies that will help them learn, retain, and apply information. We should create learning experiences that use the REACT¹ strategies and also take the time to inform students about why we have selected instructional methods that require their active participation. Furthermore, we should not be



surprised if students need to be taught how to carefully observe and record data, for example, or how to communicate effectively as part of a group. The REACT strategies are designed to help students build new skills and knowledge regardless of their starting point. If you see the following student behaviors within a lesson, chances are good you're teaching contextually!

RELATING: *Learning in the context of life experience— everyday sights, events, and conditions—allows learners to then relate those familiar situations to new information to be processed or problems to be solved.*

EXPERIENCING: *Learning in the context of exploration, discovery, and invention is the heart of contextual learning. However motivated or tuned-in learners may become as a result of other instructional strategies such as video- or text-based activities, these remain relatively passive forms of learning. And learning appears to "take" far more quickly when students are able to manipulate equipment and materials.*

APPLYING: *Learning by using new concepts and information in a useful context allows students to envision future success in careers and*

postsecondary education. In courses taught contextually, applications are often based on occupational

activities—ideally authentic, non-contrived, real-world tasks. These contextual learning experiences may be supplemented with presentations by guest speakers and followed up with firsthand experiences such as plant tours, mentoring arrangements, and internships.

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COOPERATING: *Learning in the context of sharing, responding, and communicating with others* is a primary instructional strategy in contextual teaching. The experience of cooperating not only helps the majority of students learn the material; it also is consistent with the real-world focus of contextual teaching. Employers value employees who can communicate effectively, who share information freely, and who can work comfortably in a team setting. We have ample reason, therefore, to encourage learners to develop these cooperative skills while they are still in the classroom where we can facilitate the process.

Laboratory activities are essentially cooperative in that students typically work with partners to do the laboratory exercises; in some cases, they work in groups of three or four. Completing the lab successfully requires delegation, observation, suggestion, and discussion. In many labs, the quality of the data collected by the team as a whole is dependent on the individual performance of each member of the team. The same can be said about group projects in which the outcome requires both individual and coordinated team efforts.

TRANSFERRING: *Learning in the context of existing knowledge*, or transferring, uses and builds upon what the learner already knows. Learning to transfer familiar information to new

contexts helps students approach unfamiliar situations and problems with confidence.

Another way of thinking about contextual teaching and learning asks instructors to examine the difference between traditional and contextual classroom practices. (See below.) Try the REACT strategies with your next course and share your experiences with your colleagues.

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Contextual Teaching and Learning Resources

- [Facilitating Student Learning Through Contextualization](#) Delores Perin, Community College Research Center, Teachers College, Columbia University, 2011
- [Contextualization Toolkit](#) Breaking Through Initiative, National Council for Workforce Education and Jobs for the Future, 2010
- [Contextual Teaching and Learning](#) A professional development module created for NC-NET by Mitchell Community College. Access it from the [NC-NET module server](#); **user name:** faculty **password:** nc-net *Scroll the alpha listing of modules and select the title.* See more modules on the [NC-NET Teaching and Learning page](#).

	Traditional Model	Contextual Model
Purpose	Transmission of factual information	Finding, developing, and applying knowledge to the real world
Organization	Classroom isolated from the world of work; instructors and students work alone	Classroom connected to the community and patterned after the workplace
Role of Instructor	Transmitter of knowledge; expert	Facilitator, coordinator; a knowledgeable guide to finding, developing, and applying knowledge
Role of Student	Passive recipient of facts and information through lectures and text reading	Active engagement in learning; student constructs learning through workplace-relevant activities
Content	Subjects tailored for verbal and mathematical/logical intelligences	Subject application tailored for multiple intelligences
Method	Lecture; question and answer; little attention to variance in learning styles	Inquiry, discovery, applied learning and methods
Assessment	Testing of facts through paper and pencil (or computer-based) objective tests	Authentic assessment of real-world performance tasks; demonstration of complex problem-solving; creation of portfolios of work; capstone project requiring synthesis of ideas