# Introduced stimulating ideas about the subject

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## Why this Teaching Method Matters

Capturing students' interest and getting students engaged are critical to successful teaching and learning. Research on the dimensions of college teaching (1) shows that stimulating students' interest in the content of the course is the most powerful predictor of the overall ratings of the teacher, and the fourth most powerful predictor of student achievement. Students may not enter your class with prior knowledge or appreciation of the subject. Instead, they may enter with anxiety about their skills or performance, a degree of resistance, or negative attitudes. Your enthusiasm for the subject can be motivating, but students can become discouraged if that enthusiasm is not connected to concepts or experiences they can understand or relate to. They may need to hear about your experiences or real-world applications of the material in order to become more involved. Thus, the term "stimulating ideas" as it is used here means not only the ideas themselves, but the application and interconnection of these ideas to learners' experiences and understandings and to real life situations where the value of the ideas becomes apparent.

Also, introducing stimulating ideas allows you to challenge students intellectually. Asking learners questions that require reflection and following up with opportunities for them to provide explanations or justifications can lead to engaging discussions and an important motivational cycle (2). As additional information, look at your scores on IDEA items #2 (helped students answer own questions), #4 (demonstrated the significance of the subject), and #6 (made clear how topics fit). Item #13 correlates strongly with these items and with eleven of the twelve IDEA learning objectives. Of particular note is that while all these correlations are strong, the strongest correlation (averaging +.795 across four types of institutions) was with objective #12, "Acquiring an interest in learning more by asking questions and seeking answers." Not only are you helping students learn content, you are helping them to become critical thinkers and life-long learners!

## Applying this Teaching Method in the Classroom

Begin with a real-world problem that students can attack and possibly solve through small group work. The solution is less important than the fact that the problem demonstrates the importance of the content or concept, that there is immediate engagement in an active learning process, and that the group work helps to reduce anxiety about "getting the right answer." If students do solve the problem, so much the better, because you will have demonstrated that mastering the content is possible. You can devise more complex problems as time goes on.

A second way to stimulate interest is to use examples that clearly connect with students' backgrounds. Ask students to draw on prior learning and personal experience to demonstrate the relevance of the content. Since learning is the sum of each person's experiences, and since success in meeting a challenge is a powerful motivator, blending experience with new content helps students to organize the new content. Neuroscience research(3, 4) has reached similar conclusions. When students succeed, they want to learn more, and they realize why learning is cumulative rather than just the memorization of bits of information. Stimulation comes in part from the realization that their success resulted from effort, the application of previous learning to new material, and the construction of new meaning.

The quality of your questions can lead students to more complex thinking and thus, lead to higher levels of cognitive activity. Questions asking for opinions, observations, or recall are useful to open a discussion or topic, but a

stair step process that leads to open-ended questions that pose problems or cases requiring analysis, evaluation, or the creation of new ideas or solutions can be very effective. Leading students through these taxonomic levels (5) also demonstrates metacognitive process and models a thorough approach to learning about new topics. However, you do not always have to be the source of stimulating ideas. Giving students the freedom to generate ideas through brainstorming, review of data or opinions, or reaction to cases, provides a different, but equally useful kind of stimulation. Students' investment in their own ideas will itself provide the motivation to further discuss, analyze, or defend these ideas and prove their worth.

A less common strategy for stimulating students is to use humor. Though it takes time to develop materials and skills, the use of humor can create interest, reduce anxiety, and provide images and other connections that allow easier recall of information (6). Anecdotes, examples, games, or other techniques can all be used to good effect without fear that one's teaching will be jeopardized. Indeed, most successful humor centers on the use of common understandings, uncommon events, or unusual twists of expected outcomes as the basis for the humor. Rarely if ever, does the use of humor mean simply trying to tell jokes, and in fact, such an approach can be dangerous. Rather, the point is finding opportunities to point out incongruity or to provide examples of various kinds of errors are rich fields for exploration. In a similar approach, many teachers introduce new topics by beginning with a contradiction, a paradox, of some kind. The contradictions they pose may be humorous because of the images they suggest or the illogic they contain.

Two final, but important strategies are to use assignments that clearly connect to course content and intended outcomes, and to clearly inform students why these connections are important to learning (7). Students often perceive out-of-class work as irrelevant or "busy work," but when the relevance and usefulness of assignments are clear, students are more willing to do the work and they value it more. The "stimulation" comes from seeing real-life applications and from realizing that the work is useful to their learning.

In sum, the introduction of stimulating ideas does not always mean presenting the most elegant, complex, or newest content. Students are most stimulated when they can connect new materials to existing knowledge, even if the connection is humorous. Making connections demonstrate that there is something valuable and interesting within the subject matter. That realization provides its own motivation for further effort and engagement.

## Applying this Teaching Method Online

The suggestions noted above apply in online situations, but you must rely on different methods for implementing them. Since you cannot necessarily rely on direct (synchronous) discussions and feedback, you have to employ asynchronous methods that engage students in discussion, debate, and presentation of ideas. Course Management Systems (CMS) have discussion boards, and messaging, dialogue, and networking technologies allow active conversation among individuals, small working groups, and entire classes. Creating work groups has a distinct advantage in on-line situations because these put learners in touch with each other (replacing some of the social aspects of classroom learning), and because work groups require ongoing internal dialogue to accomplish assignments. Work groups can respond to questions, share their ideas, and present results or conclusions to the full class. The virtue of combining engaging cases, problems, or open-ended questions with discussion forums is that students have more time to think and respond in depth. Discussion boards often promote student-student dialogue that is more thoroughly considered and more clearly presented than might be the case in brief, ad hoc classroom discussions.

This activity can easily be monitored for ongoing, formative feedback or grading purposes, and you can insert comments, suggestions, feedback, or ideas at any time. One important caution: Provide clear directions about the requirements for assigned work and equally clear description of how that work will be judged, and graded. You may have to "manage" groups at the outset, but if possible, give groups the responsibility for organizing and carrying out their work. This is a different kind of "stimulation": one that is well known and with long-established benefits for adult learners (8). It is that facilitation of active, collaborative, reflective, critical, voluntary, and self-directed experiences maximizes learning for adults. In other words, stimulating ideas, when combined with stimulating activities, have a powerful effect that applies equally in online and face-to-face environments. Research in the last decade (9, 10, 11) provides useful guidelines for online teaching and learning.

Since online courses often include repositories of online resources, you can provide an array of interesting ideas as raw material for assignments and ongoing reflection and critical thinking. Moreover, you can invite your students to contribute resources they find interesting and relevant to a shared course collection. Especially in online situations, it is not enough to just say "Here it is." Again, your guidance may be needed. For example, a

class of in-service schoolteachers in a graduate course on curriculum development will have a wealth of experience and prior training to rely upon, and they will have a clear understanding of how and why the course applies to their professional growth. A group like this can find use resources independently and make connections between prior learning and new material. On the other hand, in an undergraduate, entry-level course, such assumptions are dangerous to make and your role as the instructor may change, requiring you to be much more careful about the scope of the course, the nature and amount of work assigned, and the extent to which you must provide support, encouragement, and advice to learners. For instance, instead of giving such students the more general assignment of bookmarking relevant websites, you might ask them to find websites that provide examples of a particular idea or concept.

## Assessing this Teaching Method

Whatever strategies are used to stimulate students, it is important to monitor the engagement and learning that result. The most traditional way to assess interest is to pay attention to the classroom behavior and body language of students. Of course, this is not possible on online classes, but what can be effectively done? Some possible indicators in both situations include:

- Are questions asked and/or answered by most students?
- Do students interact with the teacher and other students?
- Is the environment passive or active?
- Are different modes of instruction used?
- Can students use different learning strategies and styles?
- Are there mechanisms for identifying confusion about content, or frustration and discouragement?

Simple techniques like "minute papers" or "muddiest points" (12) provide regular information about student progress. Course management systems have the ability to capture information about the quantity and quality of participation as well as student performance on tests. A student spokesperson or committee can be established to provide feedback to the teacher on a regular basis. Students can be challenged to devise new problems, alternative strategies, and original solutions, and to contribute to learning by sharing their strategies and successes with each other. Stimulation will come from active student participation as well as from teacher created questions, activities, or tasks. The most stimulating environment is one in which there is synergy and shared responsibility. When students and teachers challenge and motivate each other, then learning will occur.

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