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## **Teaching to Diverse Learners:**

### One Student's Perspective

As a student, I have had the opportunity to learn from a number of different faculty members, each with their own style of teaching, which may have been developed by focusing on their own learning preferences, using the easiest mode of delivery for their own specific topic, or by researching pedagogy and applying their findings. Whatever the source of their teaching style may be, however, the outcome has been similar in most of my classes. They have chosen to present materials in a variety of ways: lectures (with and without visual aids), discussions, and educational activities. In terms of outside work, professors have assigned reading, problem sets, essays, thought papers, online discussions, group projects, presentations, online quizzes, and other tasks that they hope will supplement and reinforce in-class activities and help us to learn the material. Despite this, I have seen some of my brilliant and hard-working peers struggle to do well. This is a major problem. Those who want to succeed and try exceedingly hard should be able to reflect that in their grades. Although most educators seem to agree with this sentiment, these bright students still have difficulties. What could be the source of the problem? Are they not as intelligent as their peers? Are they inattentive in class? Do they not work hard enough? Is the course too difficult? Is the professor a bad teacher? Does the faculty member tend to teach to (or test to) a different learning style? Who knows?

What can we take from this? It seems that there is not a simple explanation. Perhaps there are really a variety of reasons why some students just cannot do well in a course, many of which are beyond a professor's control. Does this mean that teachers should just

give up on trying to reach these students? Absolutely not. What it does mean is that it is both the responsibility of the student and the educator to make the class meaningful and manageable. Any student willing to put in the effort to learn the material should both have the resources available for them to be able to learn successfully and have a sympathetic teacher that can make the class effective for that particular student. What use is a class where the material is inaccessible to some learners?

From the research that I have been doing on learning style theory for the Bush Grant project participants<sup>i</sup>, it appears that there is not one certain theory that explains diverse learning in such a way that it outshines the others. Studies have shown that theories have and have not worked in practice, though the reliability of any of these studies may be questioned. These conflicting results seem to prove to us that no single theory is going to revolutionize pedagogy. Perhaps it is not so much the theory as it is the way educators think about their students that makes the topic of learning styles so appealing. It seems that if a professor thinks of their students as individuals with varying strengths and weaknesses in terms of learning and, in turn, changes the way that they teach to address this, the students will learn better, no matter what theory or theories the professor chooses to use as a guide. The most important thing is to structure a class in such a way that it is possible for any student to understand the material, no matter what their strengths are.

Making learning accessible to all students seems like a long and arduous process; students do not envy the work that professors must do for us. In the end, however, the rewards for everyone are immeasurable. So, why not undertake the challenge? There is no formula for a successful classroom, but with some research and testing of new pedagogical methods, a teacher can make a program that works.

Since the current Bush Grant project is focused on the integration of technology into the curriculum in order to teach to diverse learning styles, I would like to list some examples of technology tools that have either helped me when a teacher used them or would help me if they were used (some of these solutions were discussed at the July 7<sup>th</sup> workshop). While I cannot speak for all students, it is my hope that these examples will get professors thinking about other resources that can help them to teach their students more effectively.

I am rather shy and introverted. Therefore, classroom discussion is often difficult for me. I cannot begin to express the anxiety that I feel when I see on a syllabus that “active participation” is part of my grade. While I understand that discussions may help me to procure some skills that I will need in later life and to help professors to assess what I know about the topic, I still find it hard to get over my discomfort with large group discussions. It is difficult for me to come up with a quality comment on a certain issue when I am also listening to what others have to say. I always feel like I could use more time to think about each question. After class, when I have had sufficient time to process, I always come up with things that I wish that I could say to my classmates on some of the discussion topics. So, even though I have spent plenty of time studying the material and thinking about various issues, I lose valuable points because I feel limited by time and by my own insecurities about speaking off the cuff. One solution for students like me might be for the professor to email out a list of discussion questions the night before so everyone has a chance to think about them ahead of time. Not only will this give students adequate time to process, it might also limit some comments that are made for the sole purpose of participation and replace those with more meaningful remarks. An online

discussion board (such as the Simple Machines Forum) could also be used to remedy this problem. On a discussion board, students can continue discussion after class and those that were either too shy to comment in class or unable to come up with something to say can share what they know online.

Another problem I have had in the past is excessive mandatory assignments (more in high school than in college, however). Some professors, in an attempt to make sure that all of their students adequately learn the material, assign so much work that they have a hard time getting everything done for the rest of their courses. Sometimes, these assignments are helpful. In calculus, for instance, I would do more problems than were assigned because I needed the practice. It may be that some of these assignments just *appear* to be tedious to students, but really do hold more value than just reinforcing a certain topic. If this is the case, a professor should make it very clear why such an assignment is important to avoid careless work from their students. Most of the time, however, the work is useless to many students. I have often wished that, once I understood the material well, I could prove it to a professor and have the rest of the work be optional. Faculty could make all of this work optional and leave it up to the student to decide whether or not they need practice. Or, they could give mini quizzes to the entire class to check whether or not they require additional assignments (quiztest is an excellent program to do this online). Further, a teacher might choose to design a web program in which students must answer a series of problems and then take a proficiency quiz. A passing grade on the quiz would excuse them from further problem sets while a failing grade would lead them to another round of questions. Finally, the easiest solution might

just be to ask the students. One could make a questionnaire or just simply ask how well a topic is understood and have students write down an anonymous answer.

A couple of times, I have had the opposite problem, where there are not enough questions on which I can practice. A simple remedy would be to post a large number of problem sets or questions that are not available in the book on a course website so students who want to practice may do so.

One of my pet peeves is when a teacher makes it so obvious that they are trying to incorporate every learning style into every lecture without having any idea which, if any, students may find an exercise to be helpful. Having the same material taught three or more times in the same hour is both annoying and a waste of valuable time. Mixing it up is great; it is refreshing (not to mention that it is supportive of different learning preferences) to have a discussion after a few days of lecture or to do an in-class activity every once and a while. However, when visual, auditory, and kinesthetic modes are integrated into the lecture in such a way that the material is presented three different times, it makes me want to skip class, leave early, or stop paying attention. Instead, a professor might choose to provide the outline before class or put it on a PowerPoint so students have something to look at during the lecture (for visual learners). They can make an optional question set or an online discussion available (for kinesthetic learners). The most important topics may be valuable to present in a variety of ways, but when it happens every day, it may be more of an annoyance and a hindrance than an effective teaching method.

A common concern with faculty is that by providing resources to students outside of or prior to class, they make it easier for them to skip. It is true that many students skip class,

but it is usually a lack of motivation (which may be caused by not being taught in a way that engages the student and supports understanding) rather than a strong grasp on the material that causes truancy. If skipping does become a problem, however, professors may choose to make attendance a part of the final grade. Exceptions can, of course, be made for excused absences. This works, though it does seem a bit oppressive. The best way to get students to come to class is to make it interesting and to make them feel that class time is just as valuable as reading the text, doing the assignments, and studying. If one lectures straight from the book, students will figure that out and they will feel like class is unimportant. However, if the text is used as a study resource and not as a lecture guide, classes can be more than just an audio version of the book and, therefore, an additional tool to enhance learning.

The most important piece of information about students that I could offer to professors is to never make assumptions. Students are all individuals. What one might hear from more vocal members of a classroom is not necessarily the viewpoint of the entire class. If a teacher were to do only one thing to improve their course, it should be to make it possible for students to give anonymous feedback on their take of the course (understanding the material, presentation methods, etc.) before the semester is over. End-of-semester evaluations can provide this information, but this does nothing for the students currently in the class. With a mid-semester evaluation (an online submission form would work well for this piece), a professor can easily see how their students feel and can, thereby, make any appropriate changes to their delivery and make needed resources available.

Some changes to delivery may be involved, but the things that will make the biggest impact for motivated students who are still having trouble are the resources that are made accessible and the communication between teacher and student. By making more supplemental information available in many different ways, incorporating technology that addresses a variety of learning preferences, and by simplifying and encouraging discussion about learning with students, an adequate amount of material may be covered while still making it accessible to all kinds of learners.

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<sup>i</sup> To view some of the resources that I compiled, please visit the TEL website Learning Styles Resources section: <http://www.morris.umn.edu/TEL/lresources.html>