



FOCUS

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Wally Harsila, provides individual instruction to one of his computer students.

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Jessie McKelry provides hands on instruction to one of his students.



Gary Bocksch displays "excellence" in teaching.

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What Promotes Classroom Attendance?

Welcome Back Workshop, Aug. 29, 2007 ~ LindaLee Massoud

During the Welcome Back seminars, a group of faculty members from several divisions got together to discuss methods for improving attendance in our classes. We commiserated on the difficulty in getting students to attend classes. We concluded that although deficient student behavior was the primary cause, the faculty member could create a positive effect on the behavior.

We considered three factors that might be important to encouraging attendance: atmosphere, attitude, and actions. The atmosphere created by the instructor goes a long way toward motivating students to attend class. They need an atmosphere that is open, encouraging, and motivating. Students are more likely to attend if they see the class time as vital to their learning. Methods of achieving such an atmosphere include:

- Making good use of the class time,
- Including activities that are only available in the classroom (and testing/grading on them),
- Employing highly interactive activities (both in instructor-student and student-student), ensuring that each student can participate without fear of repercussions from either instructor or peers.

A second factor in improving classroom attendance is attitude, both the attitude of the teacher and the attitude of the students. A more positive and supportive environment results when everyone has a good attitude. It is interesting to note that the more “fragile” student’s success in a class may depend on the attitude exhibited by the teacher and the peer students. (Using the discussion board can be very beneficial for these students.)

The third factor we discussed regarding classroom attendance is actions. Actually, classroom actions may be a pre-cursor to the other two! Actions create atmosphere and attitude. Students’ perceptions of the in-

structor and their peers are a major contributing factor to classroom attendance. What actions can we incorporate into our classrooms to promote attendance?

We discussed both carrot and stick activities. It seemed sad to us that there were so many stick ideas with so few corresponding carrot ideas. Actually, after reading the article “When Words Decide” in the August/September 2007 issue of *Scientific American Mind* magazine, it seems that our comparative success with “stick” ideas may have a basis in psychology. Research shows that people are more likely to see risk when it comes to losses rather than gains (Schwartz, p. 39). By application, our students are more likely to attend class when there is a risk of failure (or lower grade) rather than when we offer only positive incentives.

With these thoughts in mind, here are our ideas to promote student attendance:

Attitude

The attitude of both instructor and students should promote the learning environment.

- Sense of being welcomed
- Know students by name (also applies to the atmosphere area)
- Give lots of positive reinforcement by name
- It’s OK to make a mistake. That’s part of the learning process
- No surprises in class and on testing. If you don’t come to class, you don’t pass. (Warn them of the way you do the tests, particularly if you talk about topics in class that aren’t in the textbook.)

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- Promote discussion in class as an attitude improvement. The interaction is important to learning.
- Appeal to the professional or business side in approaching the students. (It's not high school any more) Students appreciate a balance between academics and the real world.
- Discuss the importance of taking responsibility for their learning. Consider using a signed "learning contract"
- In-class activities could be graded or not graded
- Introduction activities (to get to know each other)
- Exchange phone numbers
- Buddy system for studying
- Group assignments IN CLASS
- Collect homework at the beginning of class. Don't accept late papers.

Atmosphere

The classroom atmosphere should be encouraging, friendly, pleasant, stimulating, and supportive.

- Rearrange the room into horseshoe shape (there is no "back" of the room!)
- Use group work requires them to succumb to peer pressure
- Grade *down* from the top rather than *up* from the bottom. Give them participation points to start with and they lose the points if they don't participate well. (Build into the syllabus the "kind" of atmosphere we will be developing through the semester.)
- Maintain a consistent atmosphere by requiring that cell phones must be OFF (not even on vibrate) during the classroom. It will bother the neighbors, even if it is on vibrate. The student must apologize to the class members and the person will get a 0 for the day!
- Reduce boredom by minimizing lecture.

Activities

Activities should be engaging, beneficial, applicable, and transparent (student can see the value).

- One-on-one, interactive activities (Q&A dialogue rather than relying on PPT and lecture)



Professor McWit, crushed by an avalanche of Philosophy 101 texts, proving again that a little knowledge is a dangerous thing.

Engaging Students at Higher Cognitive Levels ~ Brian Harding

I attended the Engaging Students at Higher Cognitive Levels conference hosted at University of Michigan-Flint on Friday, November 2, 2007. Many of our colleagues from Mott Community College were in attendance, as well as from Baker College, Kettering University, and our host, UM-Flint.

Let me first betray the fact that I am by no means an expert on pedagogy, although our conference host—Dr. M. Susie Whittington of Ohio State University—is. I left the conference with an introduction to a conceptual framework on cognitive levels of teaching and learning. More importantly, I left the conference with a number of ideas that I can apply in my own classrooms to help my students think on a higher cognitive level. In case you were unable to attend and are curious about what went on, I have written the following conference report. I hope I can pass a useful idea or two on to you here. This was a five and a half hour conference, so please forgive me if this report seems overly drawn out.

The foundational work for the conference was Bloom's Taxonomy. Bloom's Taxonomy identifies six levels of learning and places each into a hierarchy, from lower-order thinking to higher-order thinking:

Knowledge: Recalling subject matter.

Comprehension: Learners know information that has been communicated, but cannot apply in other areas.

Application: Learners apply information to different situations and learning tasks.

Analysis: Learners separate data into its component parts; these parts are differentiated and related based on their relationship.

Synthesis: Learners combine learned elements to create a new whole.

Evaluation: Learners make judgments on the value of materials and methods for given purposes.

When we, as instructors, ask our students to recite a list of facts, we are asking them to think on the first cognitive level, Knowledge. When we ask our students to summarize

facts into their own words, we are asking them to think on the second cognitive level, Comprehension. When we ask our students to predict the outcome from a given set of data, we are requiring Application. Asking our students to distinguish relevant from irrelevant statements requires Analysis. Formulating hypotheses, designing an original structure and devising a scheme for classifying information all call for Synthesis. Requiring our students to evaluate something based on established criteria calls for Evaluation.

Dr. Whittington's study of college teaching and learning spans twenty years, including over one thousand hours of classroom observation of six dozen professors at four universities. By using the Florida Taxonomy of Cognitive Behavior (which tracks fifty five observable faculty behaviors sorted according to Bloom's Taxonomy), Dr. Whittington has tracked the cognitive level of classroom discourse. In plain English: what proportion of our classroom time is spent discussing Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation? The following are Dr. Whittington's results (these have been published in peer-reviewed journals):

Knowledge: 47%

Comprehension: 33%

Application: 8%

Analysis: 10%

Synthesis: 1.5%

Evaluation: 0.6%

Bottom line: Dr. Whittington's research suggests that we spend eight-tenths of our class time discussing facts that could just as easily have been looked up in a textbook or an encyclopedia, and we spend almost no class time at all showing students how to apply knowledge in novel situations. Which begs the question: are we preparing our students to be successful in an increasingly complicated world?

In addition to analyzing classroom discourse, Dr. Whittington's study also included the collection and analysis of assignments professors use to evaluate their students. Collectively, seventy percent of the questions

appearing on the final exams required only knowledge and comprehension. Not a single question required evaluation.

As an example, in the United States History to 1877 class I teach, a major topic of study is Jacksonian America. If I were to give my students the following essay prompt, *What were the major accomplishments of Andrew Jackson's presidency?*, I would be rewarding my students for having the ability to recite information read in a textbook. Although this is not a bad thing in and of itself, I want my students to be able to do much more.

This is an essay prompt that also requires content knowledge, but requires higher order thinking: *How did the events that took place during Andrew Jackson's presidency affect the future course of United States history? Include at least one change that you see as positive, and at least one change that you view as negative. Explain your reasoning.* By the way, wouldn't it be a lot more fun, as a teacher, to read a stack of papers that address the second prompt?

I ask you to endure only one more quantitative paragraph:

Dr. Whittington's study uncovered that the number of academic challenges provided per course ranged from three to thirty two (and the mode was fifteen). These assignments were then sorted according to the type of academic challenge it called for. It was discovered that the variety of academic challenges provided within a course ranged from three to eight, but that the statistical mode was three (that is, providing three types of assessment was the most popular outcome among the professors studied). Dr. Whittington posed this question to us: "What difference is being made in students' thinking process between being challenged three times with the same type of academic challenge versus thirty two times with eight types of academic challenges?" Take a glance at one of your syllabi. How many thinking opportunities are you giving your students? How wide a variety of academic challenges are your students receiving in your classes?

The conference also spent time discussing

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Rosenshine and Furst's 1971 study on teacher behaviors. Rosenshine and Furst isolated teacher characteristics that allowed for maximum student achievement. These qualities are certainly worth looking over. The most successful students have professors who:

- Explain concepts clearly;
- Plan for and demonstrate knowledge of content/subject matter;
- Answer student questions intelligently;
- Use multiple strategies to communicate their message;
- Use a variety of instructional materials;
- Employ a variety of types of evaluation;
- Use movement, gestures, and voice inflections;
- Show genuine care for students;
- Use excitement, involvement, or passion regarding the subject matter;
- Project a manner of knowing what they expect concerning learner performance;
- Efficiently and effectively use class time;
- Know how to accomplish the necessary activities related to the successful attainment of the performance identified;
- Identify their post-instructional outcomes prior to instruction;
- Provide all students the opportunity to learn and to show they have learned;
- Teach toward students' successful attainment of these outcomes during the instructional time.

Here are some thoughts inspired by my conference attendance (these are opinions backed by no data whatsoever). I am guilty of all of the following pedagogical infractions:

We often write paper assignments for our students requiring them to use higher-order thinking abilities (this is a good thing), but we provide little or no time in class modeling these same skills for our students (this is *not* a good thing).

Coming up with higher order thinking questions is difficult. It is much easier to produce factual questions on the spur of the moment. This is probably why the majority of questions faculty members pose to their students are factual questions. Let's get around this problem by intentionally inserting questions that require higher-order thinking directly into our overheads, our PowerPoints, and our lecture notes. Let's ask our students these questions, and then let's shut up for ten, twenty, thirty seconds to give our students a chance to really *think*.

Let's make sure we walk into our classrooms each day with a list of learning objectives: "*After today's lesson, I want my students to be able to do X, Y and Z.*" And let's make sure these learning objectives require higher-order thinking.

We briefly discussed Angelo and Cross' "One Minute Paper" as a means to integrate higher-order thinking into our class time. This is a technique I hope to start using in my classes immediately. Here is how it works:

Have each student write down a question they have based on today's discussion on an index card. Encourage students to ask creative, rather than factual, questions.

Have students trade their index cards with their neighbors several times as randomly as possible.

Ask a student to read the question on the card in their possession.

Answer the question (or, even better, elicit answers from the class).

Many students are afraid of asking questions in class; step two provides anonymity so that students will not be afraid to reveal what they are really thinking.

I have used these one minute papers in the past. I would collect the responses at the end of each class, read and respond to each individual question, and return them at the next class meeting. Unfortunately, there are not enough hours in the day for me to continue that practice. I am particularly fond of Dr. Whittington's version because it provides meaningful feedback, but it does not cost me multiple hours of preparation time.

Predictors of Performance in the Virtual Classroom - Identifying and Helping At-Risk Cyber-Students

The ability of instructors to identify at-risk cyber-students quickly is critical because the usual cues associated with student anxiety, inattentiveness or apathy are not present in the virtual classroom. For instance, cues such as frowning, fidgeting and day-dreaming, which are often readily apparent in the conventional classroom, are not observable by Web-based instructors. Due to the lack of these traditional cues, cyber-instructors must develop other strategies for identifying at-risk students in the virtual classroom. In addition, conventional solutions, such as office hours and graduate teaching assistants, for assisting low-performing students are not typically available in Web-based classes. Therefore, cyber-instructors must be creative in devising strategies for helping their at-risk students. We describe several strategies whereby cyber-instructors can take advantage of the technologically rich learning environment of the Internet in helping their students. Effective use of these strategies can also help reduce attrition rates in Web-based courses.

Web-Based Instruction

We have taught three different Web-based psychology classes. In the past five years we have taught more than 30 online sections and, in any given semester, we typically teach concurrent conventional and online sections of a class. Students freely choose to register for the class format they desire. We use the same course syllabus, textbook, homework assignments and examinations to facilitate comparisons across these two learning formats. The equivalence of always been one in which pedagogy rather than technology guides the design of our Web-based classes. Therefore, we have attempted to find ways to use Internet technology to re-create important pedagogical aspects of our conventional classes in the Web-based format.

Many of our course materials are available on the course home page. This means that prospective students can obtain information about the course content, such as the syllabus, grading policy and calendar, as well as our approach to online instruction before deciding to register for the course.

Further, the home page has links to Web sites that describe characteristics of successful cyber-student. These links allow prospective students to evaluate their own learner characteristics and technological proficiencies regarding Web-based courses. For instance, the distance learning link found at www.petersons.com offers students a short online survey that evaluates their readiness for an online course. Our home page also encourages prospective students to contact us before registration if they have any concerns or questions about the content and technological demands inherent to the online course.

In our online class, delivery of course materials and instructor-student interactions occur via both asynchronous and synchronous modes of communication. Asynchronous modes include email, fax, forum (discussion) postings and downloadable information from the Web site. Synchronous communication occurs primarily in our 90-minute online lectures using a chat room, which are scheduled on a weekly basis. In this article we will describe several predictors of cyber-students performance. If instructors are vigilant, these predictors can serve as early warning indicators for students failure as well as success in the virtual classroom.

Demographic and Educational Predictors

It may come as a surprise, but basic demographic characteristics such as gender and age are not reliable predictors of cyber-students performance (Wang and Newlin 2000). While there may be a perception that male teen-agers might have a technological advantage, research does not show systematic differences in performance as a function of gender and age for the college population. Indeed, we are not aware of any research demonstrating that there are reliable demographic predictors of performance among college students who choose to take online courses.

However, the educational backgrounds of cyber-students can serve as early warning indicators for failure or success in the virtual classroom. For instance, Osborn

(2001) has shown that the number of previous distance learning courses taken by students reliably discriminates between courses. This is attributed to students' prior experiences with distance learning courses, which increase their familiarity with the technological demands of the virtual classroom. Just as importantly, these students have developed confidence in their ability to take advantage of the learning opportunities available to them in these types of learning environments. Osborn also found that students who remaining distance learning courses take greater number of college courses and have higher college GPAs compared to those students who drop of these courses.

Psychological Predictors

Recently, there have been investigations as to whether learner characteristics are correlated with performance in the virtual classroom. Some of the research has investigated characteristics that can perform a specific behavior to attain a desired goal (Bandura 1997). It is situation specific because one can have high self-efficacy about accomplishing one task, but low self-efficacy about accomplishing another.

When applied to Web-based learning, research has shown that two types of self-efficacy reliably predict cyber-student performance (Wang and Newlin 2002). The first is self-efficacy for understanding course content and the second is self-efficacy for meeting the technological demands of an online course. One of the Web-based courses we teach is called Research Methods in Psychology, which includes a great deal of statistical content. At the beginning of each semester we ask students to assess their self-efficacy for statistics tasks. We find that students' self-efficacy is highly predictive of their final grade in the class. We also ask for students' self-efficacy for meeting the technological demands of the online class. We find that this measure was also predictive of student's final grades in class. Other researchers have reported similar findings. For example, students who have strong confidence in their computer skills and less

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computer anxiety were more likely to remain in a distance learning class than students with lower levels of computer confidence (Osborn).

We have also collected a measure of students' motivations for taking an online class (Wang and Newlin 2002). Our measure was situation – specific in that we asked students about their motivation for taking our particular online course, rather than for college courses in general. This measure was collected at the beginning of the online section of Research Methods in Psychology. We found that students who had taken a Web course before and preferred this type of learning environment were much more likely to succeed than those who chose the Web course because it was the only section open when they registered. In fact, students who preferred Web-based learning environments averaged one final letter grade higher than those who enrolled solely because the course was available.

In light of the above findings, we believe that cyber-instructors should attempt to gather several early warning indicators of student performance (see “Profiling At-Risk Cyber Students”). However, these indicators are of value only to the extent that they assess student self-efficacy and motivation regarding a specific online course. These indicators will not have much predictive value for cyber-student performance if they are of a global, cross-situational nature.

Online Course Activity

A resource that is typically available on Internet servers is the ability to count and record Web site activity. Cyber-instructors will find that this can be a valuable asset when monitoring the course-related activity of their students. For instance, WebCT courseware has a student-tracking function that allows cyber-instructors to monitor the frequency and time of each student's visit to various pages on the course Web site.

Tracking a student's online course activity is important because it can reveal several

early warning indicators of student performance in the virtual classroom. For instance, research has shown that the total number of home page visits during the first week of a course is predictive of final grades in the 16th week of the course (Wand and Newlin 2000). This research also found the total number of forum postings read and written by cyber-students during the first week is predictive of their final grade. Because this type of tracking information is automated and readily accessible by instructors, we strongly recommend its use as an early warning indicator of cyber-student performance.

Cyber-instructors who rely on electronic chats as a means of synchronous communication have an additional tool for identifying at-risk students. Specifically, cyber-instructors can monitor the number and type of student comments posted to online chats. For instance, when we performed a discourse analysis of online chats during the third week of our class, we found that the total number of student statements and the frequency of student statements and the frequency of student responses to our queries were both predictive of final grades in the class (Wang, Newlin and Tucker 2001). Thus, we recommend that cyber-instructors monitor the frequency and type of student remarks that are made in an online chat room.

Helping At-Risk Students

We take a proactive approach to assist at-risk cyber-students. This means that we first allow prospective students to select whether or not to enroll in our online course. To facilitate this process, our course home page describes the characteristics of successful cyber-students and provides links whereby prospective students can assess their readiness for the virtual classroom. In this manner, students who enroll in our online class are fully informed as to the technological demands of an online class.

As the semester begins, we also suggest that cyber-instructors engage in some quick and easy information gathering about their students. For example, our first quiz is short survey assessing students'

self-efficacies and motivations for taking our online class. The quiz is posted on a course Web page with students responding by email. At the end of the first week of the course, we evaluate these survey responses in conjunction with student-tracking data.

Specifically, we determine which students have low hit rates to the course home page and are relatively inactive in writing or reading forum postings. Then, we identify which of these students reported relatively low self-efficacy for the course and took our online section solely because of availability. Next, we make contact with these at-risk students via telephone and email to discuss with them the behaviors linked to success in the virtual classroom. At this point, we also ascertain the reasons for their inactivity in class (e.g., technical or personal) and help them resolve those issues. We try to be as encouraging as possible, while reminding students of the technological and content demands of our online course. Students are typically appreciative of our personal contact, and many are immediately able to begin exhibiting the behaviors that will help ensure their success in the online course.

We have found that students who were members of a cyber-study group had higher final grades in our class than those who preferred to study alone (Wang and Newlin 2000). Therefore, during the semester we facilitate the formation of cyber-learning communities. First, we require that all lab reports be submitted as group projects. Second, many of our Web pages encourage students to “be good citizens of cyberspace and help each other out.” Third, we instruct our students to use online chat rooms and forum postings to “meet” other people and form study/lab groups.

There are two reasons why we believe that these cyber-study groups are beneficial for at-risk students. First, the peer-to-peer interactions needed for collaboration promote a collective sense of responsibility that is not ordinarily found in the virtual classroom. Second, cyber-students who

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have low self-efficacy or an external locus of control receive feedback and encouragement from their study partners. Consequently, this form of peer-to-peer interaction is an additional incentive for these students to perform well in the virtual classroom.

Finally, we believe that a heightened social presence by the instructor is beneficial for the at-risk-cyber-student. Social presence refers to the degree of salience that another individual will enter into a meaningful dialogue (Short, Williams and Christie 1976). Accordingly, social presence is enhanced when another individual is perceived as real and genuine. This is critical for the virtual classroom because learner satisfaction is higher when computer-mediated communication is associated with high levels of social presence (Gunarwardena and Zittle 1997).

So how can cyber-instructors increase their social presence? By ensuring that there is immediacy and intimacy in the way they communicate with their students. This is best accomplished by the way synchronous communication that occurs in regularly scheduled online chats and virtual office hours, and not simply by email correspondence. At-risk cyber-students who have an external locus of control and low self-efficacy for the class will benefit the most from this sort of interaction.

Profiling At-Risk Cyber-Students

There are several indicators that, taken collectively, are reliable predictors of poor performance in the virtual classroom. Accordingly, we do not suggest relying on a single indicator as a means of identifying the at-risk cyber-student. Instead, we recommend that cyber-instructors compile several indicators to form a profile of the student who is potentially at-risk. In our view, any student who matches four or more of the characteristics on the following list has the potential for low performance in a virtual classroom:

- Does the student have an external locus of control?

- Does the student have low self-efficacy regarding their computer skills?
- Does the student have low self-efficacy regarding the course content?
- Does the student lack previous experience with online courses?
- Did the student have a low login rate for the course home page?
- Did the student enroll solely because of course availability?
- Is the student reading and writing few messages on the class forum?
- Is the student quiet or nonresponsive in the online chat room

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