This series of one- to two-page abstracts highlights a variety of innovative approaches to teaching and learning in the community college. Topics covered in the abstracts include: (1) internationalizing the curriculum through focused interaction; (2) improving the small group approach to learning; (3) writing across the curriculum with early essay tests; (4) how to start writing a paper; (5) an oral approach to communication; (6) curing library phobia; (7) adult student development in an off-campus setting; (8) information for mature women thinking about college; (9) establishing a writing workshop; (10) longevity and organizational climate; (11) using teamwork as a key to success for students with disabilities; (12) evaluating student class participation; (13) high expectations for student papers; (14) cultural and linguistic exchange; (15) breaking down barriers; (16) thinking and working like a scientist; (17) celebrating teaching excellence; (18) programs for enhancing academic growth; (19) writing centers; (20) sitting and standing in class; (21) encouraging students to become more involved readers; (22) helping freshmen survive their college experience; (23) involving administrators in the teaching process through team-teaching; (24) surveys of departing students; (25) using student evaluations for instructor learning; (26) getting students involved in the community; (27) activating learning in the classroom; (28) letters to a teacher; (29) broad-based community courses; and (30) inviting nontraditional students into the science culture. (DJD)
Bringing Worlds Together: Internationalizing the Curriculum Through Focused Interaction

Internationalizing the curriculum, student-centered learning, values clarification, cross-cultural awareness, writing to learn, and cooperative learning are all important issues in education today. This fairly easy-to-arrange exchange between a high-intermediate English as a second language (ESL) class and a sociology class incorporates them all; the basic concept can be adapted to a variety of courses/levels.

Internationalizing the curriculum is not a matter of inserting “international” courses into the curriculum, but of integrating an international perspective into all courses. One of the valuable attributes of the method described here is just that: By matching internationals with sociology students in small groups to discuss family customs and issues, cross-cultural awareness becomes an inherent element rather than an isolated curiosity.

Early in the quarter, a date was arranged for an ESL composition class (17 students) to come to the Sociology of the Family class (20 students) for a 50-minute visit. We (the instructors) hoped to expose both groups to the practices and values of family life in other cultures, to give students practice with writing and thinking through writing, and to give the ESL students greater opportunities to talk with native speakers of English.

We divided each class into four groups, trying to balance each group to include students of different genders, races, personalities, ages, and national backgrounds. In the sociology class, students worked in small groups to develop a list of 10 questions about such topics as dating, marriage, sex, and child-rearing in other cultures. In the ESL class, it was important for the students to become familiar with the ideas and vocabulary for the visit: students, therefore, prepared by first responding in their small groups to the Americans’ questions, then compiling a list of their own questions concerning customs in the United States. In addition, as a composition class, the ESL students generated five family-related essay topics; each student wrote on one of the subjects as a class assignment.

On the day of the actual exchange, the sociology class brought refreshments for the international guests and arranged the desks into four “tables” to create an informal setting. Maps on the walls aided students in locating the various nations represented. After a cautious start, the international exchanges became so lively that the noise level in the class reached record levels. A number of conversations continued even after the class was formally over.

The following week each instructor evaluated the experience by surveying her class with anonymous questionnaires. In addition, the sociology class wrote about the visit for their journals, and the international students wrote essay-style commentaries on the exchange. The feedback was overwhelmingly positive; 100% of the students expressed a desire to have additional opportunities to interact.

Some specific comments from international students (English uncorrected):

“I was happy because we were acting as one family.”—Lebanon

“We have had a warm relationship with our student’s group—the idea of small groups was great—the only problem is that the meeting was too short, so we didn’t have time enough to answer all the questions...”—France

“What I liked best was the sociology class were friendly people. In my group we went on discussing as if we knew each other before.”—Somalia

“I’m surprised to know that American students are talking about these problems seriously. That’s good. In my country people tend to avoid discussing these kinds of problems. I think it should be changed.”—Japan

“I found that meeting interesting because it was the first time that I discussed with American students about my society’s culture and also theirs.”—Iran
We have repeated the exchange, making the groups smaller (four to six students in all). With the noise level in mind, we allowed one-half of the students to meet in one classroom and one-half in the other. For the future, we are considering journal exchanges or making one-to-one student matches for more intensive interviews. We are excited about the possibilities for long-term cooperation and integration between ESL and regular curriculum classes. Certainly this experiment could be a model for similar exchanges in other sociology classes, as well as political science, English, economics...and the list goes on.

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Improving the Small Group Approach to Learning

As an educator who has embraced her share of novel approaches in the classroom, I am constantly on the alert for new and effective techniques. Although lecturing has its place in the process, too much lecture makes the process too teacher-centered. Many students seem satisfied to stare passively and jot down the occasional note triggered by the vocal calisthenics of the performer at the podium. Later these same students may recall little of the content since they have not grappled with it or manipulated it into a useful form.

To supplement introducing new material in lecture, I have tried to use methods which force students to participate. When small group work became "the rage" years ago, I jumped in to experiment. I envisioned non-threatening learning. This vision splintered as small groups disintegrated into exchanges about the "ultimate date" or "hot places for action" on Friday night. Only when the "small-group enforcer" was approaching did the conversation drift back to the assigned task with a weak, "Joe, what was it that you thought?"

Although disappointed and frustrated by the results of my good intentions, I was not willing to abandon group work. I knew that I had to figure out how to tap its potential. I struggled with ways to make the groups real vehicles for learning, without my constant patrolling. After some years of refining, I have discovered two keys to small group effectiveness.

First, I have learned that directions to the groups must be explicit, so explicit that each group could be held accountable for completing the assigned tasks. Instead of saying, "I would like for you to discuss the article that you read for class today," I have substituted specific tasks. Now these groups are likely to receive a list of tasks that might include, "Identify the thesis of the article you read last night" and "List the three main arguments that the author presents." The groups become task-driven and do not easily stray from the focus of the discussion. Furthermore, groups could be assigned writing tasks to be shared with the larger group. If the focus of instruction had been on writing an effective conclusion in a short literary analysis, I could have assigned the task of writing such a conclu-

sion. But one problem remained—how to make the groups accountable for accomplishing assigned tasks without my becoming the visiting taskmaster.

Second, the key to group effectiveness and the answer to my policing was the overhead projector. By using a simple procedure, I found that I could avoid my dizzying circling around the room. After each group formed, I distributed a blank overhead transparency and a water-soluble pen to the designated leader of each group. This leader appointed a secretary to record the group's responses on the transparency. Then, I explained the magic of placing a sheet of lined paper beneath the transparency to create straight, more readable lines. If all groups were assigned the revision of the same thesis statement, a different color marker quickly ensured group identity. It also helped me to identify which group's response had been projected.

This process works very well. It allows the students to collaborate while writing, to review the works of other groups, and to discuss their differences. Students respond more critically to the class-generated writing if they have struggled with the same assignment. They are more willing to labor with writing since their audience is their classmates. Finally, they seem to remain "on task" because the transparency is collected and reviewed by their peers.

These steps have relieved me of constantly monitoring groups, provided an atmosphere for student interaction, and made students accountable for using class time to really learn. With a little twist on an old technique, I have achieved some obvious improvements and feel much better about using small groups for classroom instruction.

Jo Ann Buck, Department Chair, English/Humanities

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When I first began teaching many years ago, I quickly learned about how a conscientious teacher should prepare for a class. Before the class I should create a lesson plan and make well-researched, reasonably clear notes to guide me as I filled the blackboards with explanations for the students to copy. I should have solved all assigned homework problems and put the solutions on the blackboard, and the students should compare their work to mine and make corrections. I should have a list of fresh problems to assign for homework. A pocket full of chalk, maybe a wooden stick pointer, and away I would go to the classroom, as prepared as any professional teacher should be.

Anyone could tell by looking through the doorway of a class in session that I was a “good” teacher. I would be standing at the front of the classroom, chalk in hand, chalk dust all over both hands, chalk dust on my right jacket pocket, and a big yellow chalk dust smear just above my right sleeve. Homework problem solutions would be filling the boards, and the well-behaved students would be copying these solutions down into their colorfully divided three-ring binders. A verbal question from a student, preceded by a raised hand, would be enough to convince any viewer that this was an exemplary class, conducted in the most ideal manner possible. In those days, I would have agreed that this learning situation was ideal, but my experience in 1984 changed my outlook completely. In those days, I would have promptly and seem so happy, even though I was doing a pretty miserable job as a teacher. It made me wonder. If I saw me doing this, would I fire me?

It amazed me that they continued to arrive so promptly and seem so happy, even though I was doing a pretty miserable job as a teacher. It made me wonder. If I saw me doing this, would I fire me?

It is important for all of us to remember that organized patterns of teaching formats and normal lesson preparation methods are worthless if they don't lead to the desired result. And the desired result is a happy, productive, and stimulating environment where students, and even we teachers, make good use of our time and learn from each other. None of us in a classroom can produce as good a learning environment as all of us can. Because we all have different personalities, styles, energy levels, experiences, and priorities, classroom operations will look different. However, while collectively striving for the desired results, we can enjoy each other's individual methods of achieving them.

Bill Klaas, Dean, Mechanical Welding and Skills

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Imagine taking an essay test on the SECOND day of a college course. Imagine that test being on the content of the course syllabus distributed on Day One. I couldn't imagine giving an essay test on the second day of classes, much less taking one—until this most recent term, that is.

While attending "Smoky Mountain II," a University of Michigan-sponsored seminar on college teaching and learning, I discovered the value of writing an explicit, detailed course syllabus. Until that seminar, I had always assumed that a syllabus consisted of a calendar of class meetings, topics, and test dates. I had my eyes opened to the benefits of communicating in writing considerably more than dates, topics, and office location and hours.

For example, I now include a description of my educational philosophy and teaching methods. I provide a statement of rationale for the course, an explanation of why the particular texts and readings were chosen, and a description of testing (feedback). As a result, my syllabus is now 8-9 pages in length (from a former 2-3 pages).

Why include this much detail in a syllabus?—to make clear in writing what is expected of students and in turn what they may expect from a course. What is the value of this much detail?—to provide students with a document that tells them about the instructor and his/her seriousness in teaching that particular course. Students take several classes, and it is difficult to recall the different requirements and expectations among the various subjects and professors. A detailed syllabus becomes a useful reference document for both instructor and students throughout the course.

Do students take the syllabus seriously? Do they really read it? The answer all too often is "No." How do we, as teachers, convey to students the importance of anything in our courses? We suggest: "This may be on your next test." So assign the syllabus as part of the reading on day one of classes for day two; then announce: "Tomorrow there will be a test on the syllabus!"

I've followed this procedure regularly for several years as a way of assuring that students will read the syllabus. Until this most recent term, however, my "tests" were "quickie" true-false and completion exercises that took about 10 minutes of class time; furthermore, students graded their own work. This "pop" test on the syllabus served as a point of embarkation for explaining orally, in further detail, certain key points I wanted to stress about the course. I also informed students that I wanted them to become knowledgeable and comfortable with the requirements of the course by the third day of classes—hence, the assignment of "study the syllabus" and the time spent testing on it.

For the first time this past term, it occurred to me to test, in essay format, the students' comprehensions of my now-expanded syllabus. I asked them to write a four-paragraph, in-class essay—a "letter" to a friend. The first paragraph was to establish a thesis and describe the course content in general—a topic covered orally on day one, as well as explained in the syllabus. The second paragraph was to describe course requirements—tests, papers, etc. The third was to describe the teacher—this "strange professor who thinks that students should write essays in a history class, avoid being late to class, and never chew gum!" Finally, the concluding paragraph was to contain some expression of the student's individual hopes, expectations, concerns, and/or fears in regard to the course. Students were given 10 minutes in which to complete a full-page or one-and-one-half-page essay; those who turned in acceptable essay-letters would receive one extra-credit point in the course, but there was to be no penalty for unacceptable letters.

What were the results of this exercise? Most essays covered the course content well and in sufficient detail to assure me that students had studied and understood the syllabus. The essay-letters also gave me a quick glimpse at my students' writing abilities. I had the opportunity to note in the margins how students could improve their writing (in anticipation of the three major
writing assignments in the course). Many students omitted creating a clearly written thesis statement in their opening paragraphs. Others skimped on specifics. Some failed to use paragraphs and an essay format. Therefore, in returning the papers to the classes, I debriefed the exercise and explained such matters as, "Raiford likes DETAILS; you MUST write in paragraphs; spelling and grammar, as well as punctuation, WILL count in this course!" In short, not only did I get a feel for students' writing capabilities, but in my providing feedback I gave them a feel for just how serious I am about their writing well.

This exercise gave me a chance to introduce our Writing Center at the beginning of the semester, not "after the fact" of the first major essay test (in the third week of the course). The benefit to the students is obvious: With my pointers on composition and those from the Writing Center, students should be able to turn in improved papers throughout the remainder of the course. The benefits to me as the instructor are also obvious: Essays are easier to grade, and frustration over poor composition is reduced.

The purpose of this exercise was not to frighten or discourage students from staying in the course. No one dropped because of the writing requirements in the course! It was to instill, from the start, the necessity of putting to use in this course what students have been taught for years in their English classes. The results have been gratifying. Of 40 essay-letters, 30 proved acceptable and earned the extra-credit point. Also, in subsequent weeks of the term, eight of the students actually went to the Writing Center for assistance. I also collected the essay-letters and compared them with the first major essay assignments; 50% of the students who exhibited deficiencies in the initial essay-letters have now demonstrated rectification of those deficiencies. My time and frustration in subsequent grading has diminished accordingly—not a bad payoff for following a whim and for spending a little extra time in grading essay tests on day two of classes!

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**Essay Test On The Course Syllabus**

Compose a four-paragraph essay about this course in the form of a letter to a "friend," real or imagined! Be sure to establish a thesis in your introductory paragraph. Describe the course content in your second paragraph. In your third paragraph, comment on various specifics about how the course is managed and taught. In your final paragraph, comment on your expectations, hopes, fears, etc., regarding the course, and offer a conclusion. Remember: grammar, spelling, and punctuation will be considered in the grading of your essay-letter. You have 10 minutes to write 1 to 1-1/2 pages.

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The Mushroom Method: How to Start Writing a Paper

I teach History of Anthropology, a course included in the writing-across-the-curriculum plan to teach writing, reading, and subject mastery as interdependent rather than as separate skills. The course is an upper-division course that combines lectures and classroom presentations, and requires extensive writing. The following instructions were developed because, after teaching the class for two years, I was not seeing much improvement between drafts (despite labor-intensive "corrections" and breaking the paper into four stages). The students needed more help in the first stage—the chaotic data-gathering and processing. The following instructions were designed to provide this help.

Instructions for Growing a Mushroom

Using notecards when you first begin preparing to write a paper is like providing the mycelium from which mushrooms grow. (Mycelium refers to the scattered filaments that, through a mysterious process, come together and grow into a mushroom.) To create a paper, you need to gather filaments. A paper is not a bouquet of other people's mushrooms; it is your own mushroom, grown from numerous microscopic fragments of information.

Your paper is a 10-page synopsis of the life and contributions of a major contributor to disciplinary anthropology between the mid-19th and mid-20th centuries. It should contain information about this person's biography, the intellectual context in which he/she was nurtured, a statement about his/her theoretical orientation, and a review of his/her important theoretical contributions.

What do I put on the notecards?

Begin by collecting bits and pieces of information relevant to the above categories (biography, major theoretical contributions, etc.) on notecards. Begin with your assigned textbooks. Make a bibliographic card for each textbook. Look up your person in the index. Break down the information in the textbook into categories (e.g., on a card headed "Personal characteristics," put only the material that refers to personal characteristics, such as the fact that he was very friendly but was rumored to have murdered a native in the tea fields, or that she was always approachable by students but had a pathological hatred of short people with gray eyes; on a card headed "Teachers" or "Influential people," include information such as "studied at Cambridge under the noted historian Brooke" [put cross-reference notes to yourself, such as cf. Cambridge; Brooke]. Always include the source of your material (e.g., Hodgson 1967: 22).

After transferring information from your textbook, go to the books on reserve in the library and do the same thing with them. Then go to the American Anthropologist and look for obituaries. Try to read, or at least look at, the major books and papers written by your anthropologist. Continue to build up your bibliographic files, keeping track of where things are and whether you have to order them. Expand your horizons by reading about the people encountered and influenced by your anthropologist (if you're doing Frazer, you should read about Tylor et al., and also look at books on the Victorian era); look at newspapers on microfilm from the period during which your anthropologist lived—perhaps around the time of birth and death.

At this point do not try to write your paper (if it hits you between the eyes, however, take it). This is the gathering phase. Gather everything, even if it doesn't seem relevant at the time. You may gain something that will turn out to be the central metaphor of your final paper. You are like a truffle-hunting pig sniffing along every inch of ground—slowly, methodically, patiently. One mycelium does not a mushroom make.

How do I arrange notecards?

I arrange notecards alphabetically, primarily because I do a lot of cross-referencing and keep developing new categories, and it's the only way I can find pieces of information. I often put information in several categories and cross-reference the cards (for example: a notecard headed "Birth" might contain the date and place of birth, with cross-references underlined: cf. death; Cambridge; 19th century; [parents' names];
World Fair; merchant class ...). If you don’t like alphabetical arrangements, try color-coding your notecards (blue for biography, yellow for major contributions, green for bibliography, etc.). but you’ll still need some method of organizing material within each category. Some categories will seem absurd and irrelevant, and often they are. But mushrooms do not grow in sterile soil.

Keep a separate section in your notecard collection for “bibliography.” Use the American Anthropologist format. On each card, put the call number of the book or journal, or indicate that it is not in the library; if you order it through inter-library loan, indicate on the card that you have done so. Place a check mark in the upper right-hand corner of the cards when you have transferred as little or as much of the reference as you want or need onto other notecards.

You might also want to keep separate sections for:
- Ideas for opening statements
- Ideas for closing statements
- Table of contents or index
- Doodle-cards for connecting ideas

Do not throw anything out. The thing you throw out is the thing you will wish you had kept (Murphy’s Law #499).

What do I do next?
The longer you continue to collect information, the more you will start to think about your material. Leave time for this to happen. Make time to think about what you’ve collected. Sit down and just look through your cards. Look at them in order; look at them at random. Keep a doodle-card handy. Think about your final paper as well as the first two that precede it. About a week before the first paper is due, write out an outline of the major events in the person’s life—they should be right there on your cards. Think about his/her life and try to sum it up in a powerful opening statement.

The Paper Sandwich
The opening paragraph is like the top slice of bread in a sandwich; the ending paragraph is like the bottom half. In between are the avocados, onion rings, and sunflower seeds—the supporting material that makes a complete meal.

Notable First Sentences:
“"It was the best of times, it was the worst of times." (Charles Dickens, A Tale of Two Cities)
“"Not in Asia and not in innocence was mankind born." (Robert Ardrey, Territorial Imperative—a theoretically problematic book, but a terrific opening statement)

Develop an opening paragraph that captures the reader’s interest and summarizes the paper. Why is this person important in anthropology? Who did he/she influence? Capture the thrust and impact of his/her life in a powerful summarizing and forward-looking paragraph.

Develop an ending paragraph that summarizes and concludes the paper. The issues raised in the first paragraph should be summed up here; the questions posed and the momentous hints should be resolved; and the key contributions should be emphasized. Writing the paper is like playing ball: the opening paragraph throws the balls out; the ending paragraph catches them.

CMM (Critical Mycelium Mass)
How does a paper get written? How does a mushroom grow? Perhaps a mushroom emerges automatically when a certain critical mass is reached. If you sow the filaments and take time to wallow in the rich, dark earth of mushroom country, writing a paper is almost like going to sleep with a box full of notecards tucked under your arm and waking up with a mushroom growing out of your forehead.

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Communication: An Oral Approach

Instructional research at De Anza College indicated that minority students were dropping out or failing developmental English classes at the alarming rates of 60-70 percent. In hopes of improving this record, I decided to experiment with an oral approach to teaching writing.

1. Lecture-to-Writing Assignments: When I lectured (infrequently), I clearly organized and developed the lecture just as the students were required to develop and organize their essays and speeches. There was an introduction, a body, and a conclusion; there was a clear statement of purpose (thesis) and main points. Each point was developed by explanation, definition, and examples. Statistics and quotations were used when appropriate. During the lecture, students practiced notetaking and outlining.

   Paragraph writing assignments were related to the lectures. On some occasions, the paragraph was a summary of the lecture (involving restating the thesis and main points); on others, it required students to develop a point related to lecture material by explanation, definition, or exemplification. In each case, students were told what to write and how to write it, and they were required to label each paragraph (summary, definition, explanation, etc.).

2. Speaking-to-Writing Assignments: Students were required to present an 8-10 minute expository speech. This speech was to have a pattern, clear organization with an introduction, body, and conclusion. It was to contain a clear statement of purpose (thesis) and some clearly related main points. Main points were developed by definition, explanation, demonstration, examples, and quotations. Each student was to submit an outline and a bibliography. During the speeches, students practiced notetaking and discriminative listening (involving identifying the purpose and main points and recognizing developmental materials for each point). This skill was then applied to reading assignments in the course.

   After the assigned speeches, each student wrote his/her speech as an expository essay. This assignment emphasized both the similarities and the differences between oral and written discourse. It also helped students learn to write with an audience in mind and to properly acknowledge and cite the sources for their quotations.

3. Discussion-to-Writing Assignments: Most of the assignments involved this activity. Students were required to read an essay from the text or one selected by the instructor. The class and I discussed the essay, including such aspects as vocabulary, language and rhetoric, and content. On the first assigned essay, I led the discussion. Student groups conducted panel discussions on all other assignments. I participated less in each successive assignment.

   After each discussion, students were required to write an essay in response to the assigned reading (and discussion). Essays followed the format established in the speaking-to-writing assignment and required the students to demonstrate an understanding of the assigned reading and the ability to show how their ideas and examples correspond to or depart from those of the subject essay.

Ninety-five percent of the students passed the course, and 85 percent passed the department essay exam on the first attempt (the other 15 percent passed on the second). The general student body in conventional classes had a 68 percent pass rate in class and a 51 percent pass rate on the department exam.

The oral approach is a natural and logical approach to teaching communication skills. It contains elements of experiential learning and field theories that many educators favor for nontraditional students. It is especially valuable in developing an enjoyable cooperative learning environment in which every student is both teacher and learner.

Wayne Shrope, Instructional Chair, Language Arts Division

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Accommodating Special Needs Students

Many community colleges are currently developing internal systems for identifying learning disabled and other special needs students and then finding the most appropriate accommodations to assist the student academically and socially. For the most part, these accommodations are extremely individualized and tied to the nature of the identified disability. The process of tracking the students, determining the accommodations, and providing counseling and advising involves much clerical support. Frequently, institutions are not able to add additional staff to accomplish these tasks, so counselors are assigned the task of noting accommodations and communicating this information to students' instructors and tutors. Such was the case at Genesee Community College (GCC). Counselors found themselves spending hours on the manual tasks associated with communicating information to the faculty and staff, and they were frustrated by their inability to spend sufficient time with faculty to answer questions or with students to monitor progress. A system was designed to alleviate these problems.

 GCC's flexible mainframe computer system allows for user system development. The POISE DMS software provides an automated system for tracking student information and producing information sheets for each instructor. The system is designed (1) to allow counselors to have access to accommodations and (2) to produce information forms without the intervention of clerical or professional staff. The components of the system include (1) a series of screens for data inquiry, update, and addition; (2) a user-written batch that takes information keyed into the file and uses it to produce Accommodation Information Sheets.

Initially, students with learning and physical disabilities are identified with a "Handicap Code." Then pertinent information—the student's name, identification number, advisor, and courses—is placed in a file for counselor access. Counselors then flag specific fields that possibly require accommodations. By selecting from a "menu" of accommodations, the data entry is reduced to a single keystroke per accommodation. The final screen shows the students' schedules, the list of accommodations with appropriate flags, and comment lines for additional information. [A flag is also used to identify students who do not wish that any information be divulged.]

Then students for whom forms should be produced are identified—a process accomplished with the POISE sort routine, using either the date of last update or updater's initials for sort selection. The user-written batch is run and creates a record in an intermediary file for each instructor listed in each student record. The form, a modified version of the screen used by the counselors, is printed in the Computer Center and mailed to campus faculty. [All the individuals involved seriously respect the confidentiality of student information.]

Counselors can retrieve the accommodations information for an individual student at any time. If a new student is identified, a record can be created easily by any of the counselors. The data in the file can also be used for tracking. For example, the file includes an accommodation for use of a tape recorder. The counselors can sort the file to see how many students have been identified with this particular accommodation, and that number can be compared to the available inventory of recorders. In the same way, all students with a need for test readers can be identified and the appropriate number of readers hired. Perhaps the most useful field is that pertaining to books on tape. Since those requests must be processed well before the beginning of the semester, the information can be generated easily and in a timely manner. Book orders can be managed without handling individual folders, and this added efficiency has helped the staff serve the increasing numbers of students.

The most positive advantage of automating the system is that counselors have more time to spend with faculty members and students, information is shared across the system, and counselors need not worry about security issues or access privileges. This concept is one that may prove helpful to a limited staff grappling with the problems associated with assisting students with handicaps.

Donald Green, Vice President for Academic Affairs

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Curing Library Phobia

Five successful library assignments, made over the first eight weeks of the semester, help students become more comfortable with using the library.

1. **Oxford English Dictionary assignment.**
   Write three meanings for a word with an example of usage for each meaning. (The assignment is three words. Of course, everyone gets different words. This is a simple copying exercise, but the students get to use the “big” dictionary.)

2. **The biographical data assignment.**
   Given the name of a famous person, write a one-page summary of his or her life using a biographical reference other than an encyclopedia. Put a citation at the bottom of the page. (The latter instruction is to teach students to write a citation in Modern Language Association style. I suggest reference books to use: *Current Biography*, *Contemporary Authors*, *Dictionary of National Biography*, *Dictionary of American Biography*, and *Dictionary of Scientific Biography*. I assign famous people whose essays appear in the students’ textbook so that some relevance is attached to the assignment.)

3. **Team essay atlas assignment.**
   Write a short essay, including the number of maps and pages, about the purpose of the atlas; make explanations about two maps. Write a citation following MLA style at the bottom of the essay. (After a few weeks, it's time to get out of the classroom and go to the library. The students work in pairs to write a 1-2 page essay.)

4. **The New York Times assignment.**
   Write a summary of an article on the assigned topic. Use only 1989 or 1990 indexes. Put the appropriate MLA citation at the conclusion of the summary. (Often these topics are current and interesting enough that I will use the same list for research paper topics. The purpose of this assignment is to get the students accustomed to using *The Times* index, a little trickier to use than the *Reader’s Guide to Periodical Literature* and other indexes. It also enables them to learn to use microfilm when they read articles.)

5. **Christian Science Monitor assignment.**
   Look up your birth date in the *Christian Science Monitor* and summarize an article from the day you were born. Write the appropriate MLA citation at the conclusion of the summary. (The students learn from this assignment that the *Monitor* is not published every day—take the day closest to your birth date—and that, in the case of this college library, files only go back to 1958. Again they learn about another publication, and they get additional practice with microfilm.)

Other than these library assignments, the students complete research on two of the four essays that precede a final research paper assignment.

On one, an explanatory essay, students must use encyclopedias to find principles to support simple products. For example, a student might investigate the principle of flammable butane needed to operate a cigarette lighter.

On the other, a causal analysis essay, they must use the *Statistical Abstract of the United States* to research statistical trends and develop theories about their causes. For example, a student may speculate on the causes for the decline of sales of black-and-white television sets in the last 10 years.

Many research tools that veteran library users take for granted are new to students.

After these assignments, students are no longer totally helpless when it comes to research. Certainly, they must still master specialized indexes—Humanities, Education, Science—but they know about some of the reference tools.

Mary K. Taylor, Instructor, English

For further information, contact the author at McLennan Community College, 1400 College Drive, Waco, TX 76708.
Encouraging Student Applications for Scholarships

Each year our college foundation offers several scholarships for students who will enter Piedmont Virginia Community College (PVCC) during the fall, as well as scholarships for students who are currently enrolled and will return in the fall. The following are procedures that are used with currently enrolled students to identify applicants for scholarships and then to encourage qualified applicants to apply for scholarships.

To help me identify and encourage scholarship applicants, I keep a scholarship file in my office. The file contains requirements for college foundation scholarships, as well as any other scholarships that I have learned are available for community college students in our area. Usually the local newspapers list two or three available scholarships each year.

About one month before the dateline for our college foundation scholarship, I ask each student currently enrolled in my classes (about 150) for the following information on a 3 x 5 card: their name, grade-point average, number of credits completed, number of credits currently enrolled, major and/or occupation plans, and where they plan to be enrolled next year. The 3 x 5 cards are separated into two groups: students returning and students not returning in the fall. For the returning students, the cards are separated into those who have the minimum grade-point average for scholarships at PVCC and those who do not. The cards of the returning students with the minimum grade-point average are the basis for the next step.

I contact each qualified student (usually a total of 10-15) within one week and encourage each to apply for a scholarship at PVCC. The encouragements may be offered with a phone call, stopping a student in the hall, writing a note, or asking a student to stop by my office. The personal contact is the most important step in this process! While signs about the scholarships are posted around the college and information has been advertised in local newspapers, most students have not processed the information or think they are scholarship types; thus, these announcements don't apply to them. In a typical group of 10 students, only two or three have heard of the PVCC scholarships, and most have no plans to apply; they are now encouraged to apply. The others are unaware of the scholarships, and they are encouraged, as well. Of the 10 students, usually five to seven apply eventually.

In my five years of informing and encouraging, only one student has known about the scholarships and has made plans to apply. In that case, I offered my congratulations!

Students with a B average who will not attend in the fall are encouraged to write their new college for scholarship information. Students with a B average, attending or not attending in the fall, are also made aware of scholarship opportunities from non-college sources for which they qualify.

Students are almost always in need of encouragement. Scholarship application is an area where we as faculty can offer very special encouragement to a group of special students.

Lloyd L. Willis, Associate Professor, Biology

For further information, contact the author at Piedmont Virginia Community College, Route 6, Box 1, Charlottesville, VA 22901.
Adult Student Development in an Off-Campus Setting

During the last decade, adult students have swelled community college enrollments. For many of them, off-campus programs have been an important entry point into higher education.

At most community colleges, student services are still geared for younger, non-working students attending classes on the campus. It's difficult and often discouraging for off-campus adult students to get the help they need. Traditional models of student development are useful, but fail to address the needs of adults in an off-campus environment.

The Second Wind Program at Lakewood Community College was designed to focus strictly on the needs of its off-campus adult students and find new ways to support their learning and development. Used as a model, it can help other community colleges plan and design student services for such adults.

Background

Most research literature treats adults as a homogenous group. Very little is known about the specific needs of adults taking off-campus courses from community colleges.

Lakewood used the "Adult Learner Needs Assessment Survey" by American College Testing to explore the needs of its off-campus students. Most of their career and life concerns were the same as adults in general; however, they chose off-campus education as a way to address them. Campus-based student services did not fit their life situation and offered them minimal opportunity for involvement. Student development, for this group, needed to match the basic ecology of their off-campus learning environment.

Program Design

The Second Wind Program made little use of campus-based services. Instead, adult students were networked into cohort groups to help each other overcome the academic and personal obstacles of returning to school.

Students agreed to enroll in at least one off-campus course for three consecutive quarters. They became part of a group of 50-60 other adult students participating in:

- One-hour Seminars held before classes on practical topics dealing with career, life, and college;
- Phone Directory with individual photos and information on personal interests, work, and family situation;
- Quarterly Newsletter on off-campus news, helpful hints, community resources, and employment and internships;
- Support Groups focused on common issues like single parenting, displaced workers, study help;
- Individual Planning with Lakewood counselors who had personally returned to college as adults;
- Adult Student Resource Center with video and audiotapes on careers, learning, and life—available for checkout.

College personnel played an advocacy and referral role, putting students in touch with other educational resources or human service providers.

Results

The Second Wind Program cut across traditional lines of the college and successfully extended student services beyond the campus. It gave students not only practical information and resources, but also a reason to contact one another. They shared common experiences and learned about themselves, their values, interests, and life skills.

The Second Wind Program created a sense of belonging that made college less risky and more manageable for Lakewood's off-campus adult students. Sixty-three percent were still in school a year later—a much higher percentage than the on-campus retention rate.

The Second Wind Program offers a student development strategy that makes off-campus education a more effective and encouraging place for learning.

Karen Pike, Director, St. Paul Center

Kurt Oelschlager, Counselor

For further information, contact the authors at St. Paul Center, Lakewood Community College, 3401 Century Avenue, White Bear Lake, MN 55110.
Fundamentals Can Be Fun

A foundation course in any discipline should be a "grabber" and have a "hook" that not only provides essential information but also excites students about the subject. Devising creative ways to teach, while enhancing student learning, is challenging, exciting, and enormously stimulating for faculty. Creativity breathes new life into basic or routine courses.

At Monroe Community College (MCC), it is necessary to accommodate large numbers of students in "Fundamentals of Nursing"; course content is presented to 200+ students in a two-story lecture hall. Traditionally, alternative learning methods have been difficult to implement in this setting.

Some attention-grabbing mechanisms have been found to be successful in obtaining and keeping students' attention.

Personification is utilized during a lecture on sensory and perceptual changes in the elderly. The lecturer enters the room dressed as a very old woman, complete with wig, glasses, cane, hospital gown, and bathrobe. She walks in a stooped posture and requires the assistance of another instructor to reach the podium. Students are generally responsive and enthusiastically await the content of the lecture.

In a class on grief and loss, students are greeted with organ music and gospel singing. The instructor enters the lecture hall dressed in mourning clothes, with her face covered by a heavy veil. Again, the atmosphere is set, and the students' attention is immediately focused on the topic.

Students who attend these classes have been found to participate more, remain attentive, and demonstrate better retention of the content on examinations. Many have said that when they reached that topic on the exam, picturing the lecturer dressed in costume helped them remember the related theory.

Instructors combine personification with class participation. When teaching methods for preventing the spread of infection, an instructor enters the classroom dressed in isolation clothing—a gown, mask, head cover, shoe covers, and gloves. The students are then free to discuss their feelings and reactions to seeing a "nurse" dressed in this manner. Later, while the lecturer reviews the proper procedure for applying and removing the clothing, other faculty members demonstrate the technique. The class, supplied with gowns, gloves, and masks, then proceeds to carry out these activities under the supervision of the faculty. Students enthusiastically participate in the activities and comment that knowledge of this skill is enhanced by their active participation in the learning process.

Gaming is another attention-grabbing technique. It is useful for reviewing content and reinforcing critical information. Many games, like "Jeopardy" and "Bingo," are conducive to team or individual play and can be used in any size class. Learning is enhanced through collaboration when students work in teams. Awarding prizes or other incentives, no matter how small, increases enthusiasm and participation.

"Jeopardy," patterned after the popular television show, uses a game board with five or six categories along one axis and dollar amounts along the other. The instructor reads the "answer," and the students or group must supply the correct "question." Each correct response is worth points/dollars; the player or team with the highest total wins. This technique has been used to review material related to medical record documentation, as well as to review content prior to unit exams.

"Bingo," using a game board of 24 spaces with a middle "free" space, is particularly helpful in reviewing definitions, factual knowledge, normal values, and abbreviations.

Admittedly, these methods appear elementary, but they result in active participation and enthusiasm, which increase motivation, comprehension, and subject retention. We have found that creativity generally requires a willingness to take risks, and there is risk in presenting materials through techniques not commonly associated with higher education.

These techniques reward both students and faculty, as evidenced by MCC's exceptional performance (95 percent pass rate) on the National Council Licensure Examination.

Karen Cardillo, Associate Professor, Nursing
Jane Garr, Associate Professor, Nursing
Pamela Korte, Instructor, Nursing

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Thinking About College?—An Invitation to Education for the Mature Woman

In 1979, afraid and alone, a mature woman (wife, mother of two teenage boys, active community member) enrolled in Schoolcraft College. By her own description, she was "scared to death" but determined to enter college. In tandem with her acclimation to college life, she organized an informal network of mature women students. Members of this network found each other eager to share information, ideas, and possible solutions to campus and home experiences.

In 1985, the Women's Resource Center recognized the need to provide formal information and support for women who are returning to school, and created 'Thinking About College?' Program Outline

"Thinking About College?" is presented prior to each semester. A packet of information is provided for each participant, including general college information and specifics of the day's program. Designed for participants to have a full day on campus, the program begins with the director of the Women's Resource Center welcoming participants and leading an icebreaker exercise that establishes relationships early in the day.

Participants write the questions and concerns they have about entering or re-entering college. The common concern, "I Don't Know Whot I Want To Be When I Grow Up," is addressed as the questions and concerns are collected. Participants are visibly relieved to know they are not alone in that concern. It is explained that total career goal and academic program plan are not necessary prerequisites for beginning a college career. They are reassured, as they take their first classes, that students have a chance to explore other courses and programs in a variety of ways, such as through the use of the library, conversations, and the Career Planning and Placement Center. This formal and informal information-gathering often leads students to more specific career planning. Continuing contact with the counseling office and other support staff also affirms and confirms course selection and program planning for students.

In the next stage of the program, the collected questions and concerns are addressed both directly and indirectly by administrators and staff from the following departments: Admissions, Financial Aid, Registration, Counseling, Learning Assistant Center, and Child Care Center. The administrator or staff member describes the goal and function of her/his area. Printed materials, such as the college catalog, admissions packet, financial aid forms, and others are distributed so that each required form or program is individually discussed. Time is allotted to answer questions specific to each area.

A flow chart is distributed at the end of the morning session to reinforce the information. This simple visual tool shows the prospective student the steps to take to get from the Admissions Office to the first day of class.

The participants are then divided into small groups of 7-10 persons to tour the campus. Volunteer peer counselors from the Women's Resource Center provide information and support as they tour. The information-packed morning is balanced by the physical activity of the tour and the chance to process the morning's information during lunch. Members of the Women's Resource Center staff and volunteers, as well as faculty members who will be afternoon speakers, are seated with the participants at lunch. The vice president for student services is also present to welcome the participants to campus and describe the services of her office.

Following lunch, participants meet a panel of three women who survived the stage of "thinking about college" and have become successful college students. Each member of the "Re-entry Panel" tells her own story. One might speak of goals, fears, challenges. Another might share the reactions of her family to "Mom" going to school, the delights and the disappointments. Another might address a particularly helpful course or support service. Time is allowed for questions from the participants. The first-person accounts are very reassuring to the participants.

After a short break, the participants select a small group session to help them identify areas of interest in
the college curriculum. These small groups include: Liberal Arts, Business, Child Development, Academic Options, Para-medical Programs, Nursing, Technical Programs, and special grants from the Women's Resource Center. The sessions are led by faculty members from each discipline and are repeated so that each person can attend three of the eight small groups.

Following the small groups, a short concluding session is held with all the participants to review the day and invite any final questions. A short documentary video describing the programs and services of the Women's Resource Center and completion of evaluation forms concludes the day.

Follow-up

At approximately mid-semester, participants who have been admitted and registered receive a call from a Women's Resource Center volunteer or staff member to ascertain their progress. Any lingering questions and concerns are addressed or referrals made as appropriate.

Tracking of participants began in 1989. At that time, 79 persons attended one of three programs. Thirty-three percent were admitted and registered for classes. Through September, 1990, two programs were offered with 43 participants and 26 percent admitted and registered for fall semester.

Academic Performance

The 1989 participants showed excellent academic performance with 92 percent earning a GPA of 3.0 or above (28 percent earned a 3.0-3.5, and 64 percent earned a 3.5-4.0).

Support Services

Approximately eight weeks before the “Thinking About College?” program, a letter and survey were sent to each 1989 participant who was a current student. Forty percent of those contacted responded.

Three 1989 participants volunteered for the 1990 Re-entry Panel, and a significant number of participants reported using campus support services. Fifty percent utilized the Learning Assistance Center and the Women's Resource Center; 36 percent utilized the Career Planning and Placement Center; and 29 percent the Financial Aid Office.

The “Thinking About College?” program begins a support process and provides a foundation for academic success for the participants. Explanation of the support services provides the resources for proactive intervention by the student should need arise.

We have discovered that mature women are a special population of students who provide the college with a wealth of valuable experiences and a very successful academic record.

Nancy K. Swanborg, Director, Women's Resource Center

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In the old Hollywood movies, Mickey Rooney would turn to Judy Garland and exclaim, “Let’s find an empty barn and put on a play!” In the spring of 1989, a communications director at St. Petersburg Junior College (SPJC) said, “Let’s find an empty classroom and do some writing!” She found that empty classroom and put forth the call at SPJC to all writers and to all who were interested in writing.

The classroom did not remain empty for long; the response from faculty and staff was immediate and enthusiastic, and in March, 1989, the St. Petersburg Junior College Writers Group held its first meeting. Cake, cookies, and coffee helped dissipate the inevitable initial group awkwardness; soon would-be writers shyly revealed their literary ambitions.

Some faculty members saw the group as an ideal opportunity to critique papers before publication or group presentation. Some shared their poetic aspirations, while others confessed to dreams of completing gothic romance novels. A few, such as this writer, simply yearned to come out of the literary closet and actually present a finished product for either acceptance or rejection.

The monthly meetings that followed proved both exciting and challenging. The diversity of material was impressive. There were inspiring poetic readings; stimulating philosophical dissertations; excerpts from novels, operas, and plays in progress; and a memorable, poignant short story. Our theatre director held us spellbound with excerpts from his opera on the life of Spanish poet Federico García Lorca. A humanities instructor intrigued us with her novel, a fascinating tale of a private battle involving a mysterious malady and chemical "warfare." A young communications instructor not only presented his current play, but further enhanced the experience by inviting each member to select a character’s part to read aloud. Another communications instructor touched us deeply, sharing her poems of personal struggles and triumphs as a young black woman. Our social and behavioral science director enabled us to flex our intellectual muscles with his philosophical paper, “The Intelligibility of ‘Personal Extinction.’”

Occasionally, a guest speaker would attend, such as the published writer of two books, with a third in progress. A former St. Petersburg Junior College student, he provided valuable insights into the world of agents and publishing. He offered writing tips, such as a wonderful handout, “Twenty Rules for Good Writing,” and motivated us with his story of frustration and despair—until his ultimate acceptance by a publisher. Currently negotiating to sell the film rights to his third novel, he and his success story elated and encouraged us.

As the months passed, it became evident that the group was strengthening itself as a unit, becoming more cohesive. It also became clear that the members were not only less timid in baring their literary souls but were, indeed, enriching and sustaining each other. Each had come to respect the other’s literary genre: “serious” novelists no longer scoffed at gothic romance writers, and some discovered that poetry and philosophy were not that far apart. The group became more a sharing than a critical experience. And bonding us all was the unanimous acknowledgment that, whatever its form, writing was work!

Word spread, and soon the little literary group of faculty and staff was slowly enriched by students who also wished to write, share, and participate. The open door of the Writers Group welcomed all and grew in number and spirit.

As the literary and rhetorical attempts improved, so did the culinary efforts. Quiches replaced cookies, homemade tarts replaced store-bought pies, and crabmeat salad replaced tuna. Each month, faculty, staff, and students eagerly anticipated the next meeting, both for the food for the soul and the food for the body. In fact, the club has stimulated as much cooking talent as it has literary talent—as much literary companionship as literary criticism.

Suddenly, it was time for the last meeting of the school year—a surprise retirement party for a beloved faculty member. There were skits, recitations, and shared memories. We were now comfortable enough with each other to risk ridicule by performing such outrageous acts as the old vaudeville tune, "Mention
My Name in Sheboygan" (complete with straw hat and cane). Or, we could dare to be moved to tears, as with a loving story about boyhood memories of a beloved grandparent. We could also be surprised, as when our beautiful and professional French instructor delighted us with a whimsical poem dedicated to our retiree. We could also be comforted with memories from a faculty member who recalled her first tentative attempts at creativity. There was warmth and joy and sadness. There was friendship. And suddenly, there was also the realization of how important the meetings had become, of how much they enriched and sustained each of us through the personal and academic stresses of the year.

It has been said that the function of an educational facility is not only to impart knowledge, but also to inspire, cultivate, and empower, so that individuals can go forth in the world and alter it for the better. It often appears, however, in the midst of papers and deadlines and bureaucratic mandates that the burdens placed upon educators are not only unrealistic but unreasonable, and that imagination and childlike dreams must be abandoned.

Not so at St. Petersburg Junior College. The Writers Group has provided an opportunity for all—faculty, staff, and students—to share their memories, their dreams, and their visions. The empty classroom has been filled with fellowship and writing talent.

Vivien M. Rowan, Administrative Secretary, Physical Plant

For further information, contact the author at St. Petersburg Junior College, P.O. Box 13489, St. Petersburg, FL 33733.
Longevity and Organizational Climate

Since many of our community colleges are completing 20 or more years of service, it is important to remember how longevity can have an impact on the effectiveness and general well-being of our human and institutional systems. Dallas County Community College District is responding to this issue by providing a team of "in-house" Process Consultants who assist work groups with renewal, rediscovery, and other situations resulting from people working together in the same location for many years.

The basic approach of the Process Consultants is derived from the following set of ideas and principles that are shared with each work group:

1. The older we get and the longer we work here, the more we begin to "value" maturity and the wisdom of experience as measures of worth to our organization. As long as we value these appropriately, but not inordinately, we will continue to move toward optimum effectiveness. One side effect of longevity that deserves attention is the impact it has on work-group dynamics.

2. The advantage of work-group members being together for years is that we really know each other well, there are few secrets, we tend to be more accepting of each other's frailties, and we have learned from and adapted to our respective strengths and weaknesses. We can also develop a cohesiveness based on mutual support, predictability, and shared responsibility. Sometimes, if we are all functioning effectively as human beings, have good will and good intentions, and have better than average communication skills, this scenario will evolve almost without effort.

This is the same process that occurs in the evolution of a healthy family system. Even the "unwritten" family rules of a healthy system seem to benefit the members. The work group members in a healthy system also seem to benefit from the group's "unwritten rules." While every organization has some work groups that fit this description, unfortunately this is probably the exception and not the rule.

3. A more likely scenario of work group evolution is one that is characterized by the exaggeration, integration, and perpetuation of resentments, unresolved conflicts, lack of clarity, stereotyping, and scapegoating. The sad thing is that this version can develop even though most of the members have good intentions. We often hear outsiders describe this kind of work group as "wonderful individuals, but awful when they are working on something as a group." The "unwritten rules" or covert norms of this group are obviously detrimental to growth and development and, in fact, can be destructive.

Depending on the work group's degree of college-wide involvement, the total organization may suffer only minor irritation, or in the extreme case become mired in a completely negative climate that is beyond any reasonable attempt to salvage it. Every organization also has its share of these groups.

4. The good news is that a work group's evolution is certainly not pre-ordained and not even serendipitous (unless we decide to leave it to chance). We have a great deal of control over what we become, and when and if we might want to change. The safeguard against a work group's random evolution is for that group to make an early commitment to consciously choosing norms and operating assumptions. If this early choice was not made, but the group members still have fairly good relationships, these norms can be chosen now and a rebuilding process can begin.

Constructive group norms are positive behaviors that are collectively accepted and embraced by group members. They must be articulated clearly and used as guidelines for the group to monitor its integrity. Some examples of norms chosen by a work group are:

- We will share tasks willingly, do whatever needs to be done without concern about job descriptions or roles.
- We will have regular staff meetings attended by all and will attempt to make them enjoyable.
- In all of our interactions with each other, we will demonstrate respect and caring.
- We will never criticize each other to external persons or groups.
We will make decisions based on what is best for students with parallel attention to our well-being.

Operating assumptions must also be overt and clearly stated. They relate to attitudes toward and beliefs in certain principles of human behavior. If all work group members are fully aware and accepting of these tenets, a common frame of reference will exist for decision making and conflict resolution. Some examples of operating assumptions are:

- The only behavior I can control is my own.
- There are many right ways to do most things.
- My operating style and pace may not be the best for someone else.
- The only way I can lose my personal power is by giving it away to someone or something.
- I can only help a student, or anyone else, if I am functioning (in terms of interpersonal skills) at a level at least slightly higher than his/her level.
- As part of a “human system” or work group, I am constantly aware that everything I do will have an impact on that system.

If work group members consciously choose their norms and assumptions, commitments will be made; furthermore, all members will expect to be reminded of these commitments by others. The group must also make a decision to conduct periodic checks on how well they are doing with their commitments. This attention to process must be an intentional decision. Moreover, it should be part of any work group’s planned activities.

Fortunately, in the DCCCD we have access to Process Consultants who can help us choose norms and identity assumptions. Nearly every college has counselors or organizational behavioral specialists who could serve in similar roles. The crucial reminder for all groups is that the longer you wait, the harder it becomes to make these new choices.

Bettie Tully, Counselor, Ombudsman, and DCCCD Process Consultant

For more information, contact the author at El Centro College, Main and Lamar, Dallas, TX 75202-3604.
Teamwork: The Key To Success For Students With Disabilities

There is a tendency to say that students with disabilities can only swim, stretch, and do modified weight training for their physical education. However, at Palomar College these students are encouraged to break out of such confines and are afforded the same opportunities for instruction as students without disabilities. A first effort at this encouragement was an adapted physical education class in snow skiing.

The class, P.E. 27-Beginning Skiing, is not unusual for a Southern California community college; but to offer this course to disabled students, and be responsible for transportation, meals, lodging, equipment, and instruction, presented some unique organizational challenges.

Preliminary organization began in September. We began a fund-raising effort among local service clubs to help defray student expenses. The cost for the five-day trip was estimated at $250 per student. After donations, the actual cost for each student was $100. (There were twice as many applicants as could be accommodated.) Those wishing to enroll were advised to take weight training and/or swimming classes to increase their overall strength and stamina. Thus, skiing proved to be a good motivator for participation in other P.E. classes.

Ultimately, 14 students with a variety of disabilities were selected for this trip: quadriplegics, paraplegics, hemiplegics, acquired brain injured, cerebral palsied, visually-impaired (totally blind), autistics, and learning disabled. Four had never seen snow, and one had never been out of San Diego County.

The group left Palomar College in the college van and arrived at Lake Tahoe 12 hours later. The rest of the day was spent unloading gear and settling into a four-bedroom house. Several students, as well as the two instructors, slept on the floor in sleeping bags. There were only two bathrooms and a minimum of hot water. Learning to cooperate and adapt to limitations were priorities.

Early the next morning, the group departed for the Alpine Meadows Handicapped Ski School. First, each student’s disability was assessed in order to assign an appropriate individual instructor. After some instruction, everyone returned to the house for a well-deserved rest. The afternoon was spent socializing, playing in the snow, and preparing dinner. The evening was spent around a warm fire, discussing goals and getting to know each other better.

This general format was repeated for the next two days. Every student learned to ski, whether on a sit-ski, a mono-ski, stand-up skis with triggers, or regular skis. All special equipment provided by the ski school was included in the cost of the lessons. The usual “fun things” associated with a ski trip, such as lunch in the lodge, a visit to the pizza house, dancing, and a giant snowball fight, were included at no extra charge.

At the end of the trip, all students and their parents or spouses were asked to evaluate the experience. Every student boosted self-confidence and achieved a higher level of self-esteem. The class exceeded the highest expectations of the instructors. The motto of the Handicapped Ski School is: “If I can do this, I can do anything.” realizing students could fulfill the spirit of this motto was a great reward for students and instructors alike.

This class would not have been possible without a total team effort within Palomar College and nearby communities. Shortly upon their return, the authors made presentations (which included a videotape of the trip) to the Palomar College Board of Governors, various staff organizations, and local community clubs. The energy and commitment generated to provide this unique class and achieve such a successful outcome has made the entire college community more aware of our disabled student program.

Ruth Tait, Counselor/Enabler, Disabled Student Program
Tony Lynds, Instructor, Adapted Physical Education

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Test Partners: A Formula For Success

In reading a recent Innovation Abstracts, an article entitled "The Algebra Cup" (Volume XII, No. 14), I was a bit overwhelmed by some of the strategies and activities that the author had undertaken in her College Algebra classes. But the idea of the "Partnership Exam" caught my attention. I had been looking for a way to help my students overcome their test/mathematics anxiety and reduce their careless errors on tests.

In the 1990 spring session, I allowed students in my General Education Mathematics classes to take one test in groups of their choosing. The results were mixed. The material for the test was especially difficult, but the test results were better than they had been in previous years. I attributed the improved test performance to the group setting. The students liked the group test, but I had a problem with it. Students who had performed poorly on previous tests chose groups with stronger mathematics students and reaped the benefits. I felt this was unfair to the weak student whose test grade was inflated and the strong student who was being "used" by the weak student. So, I discontinued the process for the balance of the session.

After some thought and discussion with colleagues, I decided to attempt the process again in all of my classes (General Education Mathematics, Intermediate Algebra, and College Algebra) with some modifications. This time students would be grouped with someone performing at or near the same level. To make that determination, students took the first two unit tests individually. I then averaged the two test grades and ranked them from highest to lowest (via a computer spreadsheet). Next, guidelines for group testing were outlined with each class: Students would be assigned in pairs or triads with individuals who had performed at the same level on the first two tests. Test partners would take the test together and turn in one set of results; each student in the group would receive the same grade. Participation was voluntary.

From among the students wishing to participate, students were assigned to groups. Groups generally consisted of pairs of students of the same sex. (I thought students might feel more comfortable working with someone of the same sex; however, there were a few groups with both males and females that seemed to work well.) There were also some groups of three students. The triads were formed either because the grouping is based on level of performance—students' test performances are not artificially inflated—or they might not be an asset to a group.

No changes were made in the tests except for the grouping of the students. The results were phenomenal. In one Intermediate Algebra class, all the students who had "test partners" scored as high or higher than they had on previous tests. This is at a point in the course when test scores generally start falling as the material gets more difficult. The group with the highest previous averages achieved the maximum possible score, an improvement of less than 10 points. However, students in the other groups showed improved test scores ranging from 10 to 40 points. One group of two students who had consistently scored in the 50's on the previous two individualized tests showed the greatest improvement (40 points).

What accounts for these phenomenal results? I think the answer is threefold. First, the test partner format minimizes or eliminates test or mathematics anxiety. Students have a support system if they get nervous or "go blank." Second, the group format reduces the number of careless errors. I suggest that each person in the group work a problem and then compare the results to determine what they all believe is the correct answer. Students comment frequently that they find each other's careless errors. Hopefully, experience with locating the careless errors of a test partner will enable a student to find more of his/her own. Third, the peer pressure of being in a group forces students to study so they can "carry their weight" on the test. A person who does not contribute meaningfully on test day is likely to be abandoned by his/her test partner(s) the next time a test is scheduled.

I feel comfortable with a test partner system in which grouping is based on level of performance—students' test performances are not artificially inflated. Group testing removes the obstacles of anxiety, careless errors, and lack of motivation to learning and successful test performance that many students experience. With these obstacles minimized or eliminated, students can truly perform at their best.

Theresa Geiger, Instructor, Mathematics

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An Evaluation Problem: Class Participation

Instructors often take student effort or class participation into account as a specific point value in the computation of a final course grade. Indeed, every instructor has an opinion about students participating in class—even if we admit it only to ourselves.

In the Physical Therapist Assistant Program at Housatonic Community College, I have coaxed, cajoled, and, in desperation, required students to "...actively participate" in learning. To my dismay, I found that my estimations of participation were often at odds with those of my students. I also found that my opinions were frequently based on subjective rather than verifiable data, and limited by my own ability to remember who spoke up in class (difficult during lively discussions) or who appeared for (instructor-set) office hours.

In response to this dilemma, I have attempted to incorporate more objective methods of evaluating class participation. While the primary goal of these methods was to improve the fairness of my grading, I also wanted to use methods that would foster team building, encourage networking, and teach students that participation means more than simply standing up in front of the class.

Included here are some of the techniques that do not require students to speak up in class and can be generalized to any curriculum.

1. Bookmarks: For each chapter of text assigned as reading, students receive an index card to use as a bookmark. On this card they write their questions about specific passages, conflicts with lecture notes, and so forth. If they have no questions, they are to write a test question and answer. Cards are submitted each week, and questions are answered either in writing or during the first few minutes of class (as time permits). A grade may or may not be assigned, but each submission is worth a specified percentage of the participation grade.

2. Student Outlines: Those students who use outlines of text chapters or lectures sign up as a group and take turns preparing each outline. Students who sign up must prepare equal numbers of outlines, which I correct and share with the group. Students benefit by refining their outlining technique, checking their information, and learning to cooperate. This activity is extra credit for participation, as not all students choose to participate.

3. Class-Generated "Crib Sheets": Before tests, students generate "crib sheets." I review them for thoroughness and emphasis, sharing my findings with the entire class. Occasionally, with a very cohesive class, we vote on the best, and I award extra points. No sheets are allowed during the test, but all make excellent study tools.

4. Term Paper Critiques: When papers are assigned, a timeline is provided for specific steps. Students may request instructor feedback at any point in the process without affecting their grades. On the date the rough draft is due, each student brings in a copy of his or her own paper and exchanges with another student. Each student must read and critique another's paper (called a Peer Critique). Each review is graded for thoroughness, fairness, and clarity—while the papers themselves are not graded or even seen by the instructor. A copy of the corrected review is then sent to both the reviewer and the paper's author. Students learn to be more cautious in interpreting research data, become more comfortable with their own papers, and benefit from the research of their peers. (An aside: I now get fewer late papers!)

5. Doing It Wrong: Since many health care classes include laboratory periods for practice of clinical skills, videotapes often help convey what lectures cannot. After showing a professionally made but terrible video, I realized that students loved being able to critique this anonymous person and suggest ways the actors could have done it better. I now let small groups of students make up vignettes—complete with mistakes! The actors and production staff receive credit for a list of planned mistakes. These "shorts" have enabled students to work together (often with new and unfamiliar equipment)
and to laugh while learning. For them, it is being up in front of the class without really being there.

6. **Cartoons, Crosswords, and Other Hobbies to Show Off**: Occasionally, I have encountered students who enjoy drawing, crossword puzzles, limericks, and so on. I encourage these pursuits and have used student contributions as test items, homework, or extra credit. All items are posted and judged at the end of the semester. Points are given in categories such as Best Pun, Most Unbelievable, Funniest, and the like. Not only has this “show and tell” brought us smiles; it has also taught future health professionals about where the lay public gets some of its beliefs and how to evaluate strange-sounding claims.

Finding and using more objective methods to assess student involvement in the classroom have been difficult, but rewarding, instructional efforts. I have gotten to know the students better; moreover, they have tried harder, knowing that the efforts, rather than the results, are being evaluated. Given a variety of participation methods, students have been more willing to participate in all ways. I have found myself, therefore, in the position of reviewer and counselor rather than pacesetter and evaluator.

Reisa Fedorchuck, Coordinator, *Physical Therapist Assistant Program*

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Yes, We Can Expect Perfect Papers

Having been involved in graduate education courses and in administration for almost 10 years, I had lost touch with the real world of the community college student. Was I surprised when I stepped back into the classroom two years ago!

Some of my colleagues tried to warn me, but I wouldn’t listen. They said that the community college student of today has changed and cannot be expected to write—period. Did I believe them? No. Did I get some proof that they were right? Yes.

In the first class I taught, I assigned what I thought was a relatively simple writing project; it was to be a brief research paper based upon a minimum of 10 magazine articles and was to contain no less than three and no more than five pages of body, plus a cover page and a bibliography—a weekend project at best. Wrong! And, when I suggested that it be typed, the students almost came unglued.

The best paper that semester had 66 mistakes on the first page (I didn’t bother to read the second). The worst paper had 88 mistakes on the first page (this one from a computer science major whom I knew had access to a spell-checker, thesaurus, grammar-checker, etc.). Surprise!

When I asked the students what happened, the standard answer was, “We’ve never had to write a research paper before. We’ve always written essays, and the instructors never checked for mistakes. They only checked for content.”

“Impossible,” I thought. So, I checked it out with students in other classes—same response.

Maybe I hadn’t made myself clear. Next semester I beefed up my instructions; checked out the writing lab, the library, and the tutoring department to determine what help was available; and took another shot at research papers. The results were a little better—some papers actually were typed, and some only had 30-40 mistakes. Something worked, but what? Careful analysis of my instructions indicated several loopholes—the writing lab didn’t understand exactly what I was trying to do, ditto for the tutoring lab. No fault with the library.

The next semester I made some serious changes in the instructions to students. Also, I asked the students to buy a copy of the stylebook used by the English department, the writing lab, and the tutoring lab. (At least we would all be singing out of the same songbook.) I scheduled tours of the library. I spent two hours during my management courses to personally take the students to the tutoring labs to introduce them to word processing on the lab computers. And I set to learning more about how to teach research writing.

Then, I announced: “You will be allowed no more than five mistakes on the entire paper.” My rationale was that this number would be generous enough. After all, if these students were going to be the future managers in the business world, five mistakes could be enough to make a small business go belly-up; and I wasn’t teaching them how to fail! Great idea, right? Wrong, again.

Students went to the program director, the chairperson, and the dean. The end result was that I had to back off a little, but it was still my belief that a perfect paper was not entirely out of the question.

The spring semester brought about more changes in the instructions and more study on my part—and these extra efforts are now beginning to pay off. I actually had two papers with no obvious mistakes and several more in the range of 4-5 mistakes. On average, the quality of the papers has improved dramatically.

The current process goes something like this:
1. After the initial shock of the first day of class, I distribute the term paper instructions and go over them very carefully—word by word and page by page. The final paper is to be a research report from at least 15 magazine articles and contain 5-10 pages of body, plus cover page, contents page, and bibliography. It is to be typed. The instructions include a copy of the grading sheet which will be used to grade each part of the final paper. To support this project, I include a library tour, writing lab tour, and “private” sessions from the tutoring lab instructors to learn the basics of word processing.
2. The term paper is now a phased-project over a 16-week semester.
A. During week one, a topic is negotiated and submitted on a 3 x 5 card.
B. Two weeks later, a preliminary thesis is submitted on a 3 x 5 card.
C. Two weeks later, a preliminary outline is submitted—typed. The students must have gone to the library and completed some reading to get this far.
D. Paper number one (due one week after the outline is submitted) is a summary of one magazine article on the agreed-upon topic. The summary is written on a paper I provide—15 marked lines with space for the title, author, publication, etc. This paper may be handwritten. It must include one quote from the article. At this stage, I want to see content—i.e., whether students know how to summarize without including their own opinions. (I found that I have to teach them how to summarize. All students read the same article, summarize it, and read their summaries aloud. We discuss any major points they omitted and how to condense a summary, if necessary.) I check for accuracy in grammar, punctuation, spelling, etc. This paper is graded and returned before paper number two is due. The grade for this paper is 10 percent of the grade for the final paper.
E. Paper number two (due one week later) is a summary of two more magazine articles on the same topic—one summary, two articles—again on 15 lines. This one may also be handwritten and must include two quotes—one from each article. There are now three articles on the same topic and two 15-line summaries of the three articles. The paper is graded and returned before paper number three is due. The grade for this paper is 20 percent of the grade for the final paper.
F. Paper number three (due two weeks later) is a summary of four more magazine articles on the same topic. (Note: For each assignment, the number of articles has doubled.) There is one summary of four articles with two quotes—student’s choice. This paper is to be typed, and the limit of 15 lines is still enforced. At this point, I bring to the students’ attention that they are now halfway through the paper; i.e., seven articles have been read and summarized. This paper is 30 percent of the grade on the final paper.
G. The last assignment becomes the final paper. This time students must read eight more articles (for a total of 15). The body of the final paper is to contain information and quotes from the first three papers (not necessarily verbatim quotes). By this time, I have corrected papers and shown students how to cite publications; how to use quotes; how to use the spell-checker, the thesaurus, and the grammar-checker on the computer; and generally how to “think” in terms of a perfect paper. In addition, I inform students that I will go over the paper and check for mistakes at any time they choose before the final paper is due (two weeks before finals week). This check is not a grade; I just help “fine-tune” the final project. The grade for the final paper is 40 percent of the grade for the entire project.
(During the final two weeks of the semester, I grade the papers. I read every word, including cover page, contents page, body, footnotes, and bibliography, and look at style as well as format and content.)

The papers are getting better and better; the students are the same, but there seems to be more motivation. The students still complain at the beginning of the semester when they find out that the rumors they’ve heard are true; but by the end of the semester, their attitude seems to have changed.
The word about my classes is spreading, and I am sure that some students shy away from them and me. Yet, I can’t help feeling that “the harder I work, the luckier I get.”

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A Cultural and Linguistic Exchange

Although a Spanish language class for adults and a community college class of general studies (reading assistance and English) may seem to have little in common, I put the two together for a unique learning experience. I approached my Spanish-speaking general studies students with the idea of being “guest speakers” one evening in my Spanish class in a nearby community. The idea was enthusiastically received although I offered no pay, no extra credit, and no fringe benefits of any sort.

Once the idea was approved by my Spanish-speaking students, I developed a basic outline so they would have some guidelines for their talk, although I made it clear that the outline was only a guide. In the outline, I suggested they touch on the following topics: a description of their place of birth and surrounding area; a description of their family, along with their interests and hobbies; reasons for immigrating to the United States; their first impression of this country; and comparisons between their hometown and Woodland. Finally, I asked them to comment on their efforts to learn English and to offer suggestions to the students learning Spanish. We then met several times after our regularly-scheduled class time to discuss the procedure we would follow in the Spanish class.

The students who were enrolled in my Spanish class were also prepared for the encounter. They were given a copy of the same outline one week before the presentations so they would be familiar with the type of material to be presented in class. We had a lesson on interrogatives in Spanish, as well as a review of the verbs most likely to be used in the presentations. We also practiced preparing questions, and the students were asked to prepare several questions, of a general or personal nature, for each speaker.

On the night of the exchange, I divided the class into five groups of four to five students each. Each guest speaker was assigned to a group. As the purpose of the session was to promote an exchange of ideas, I encouraged students to ask questions at any time, to change the subject if they so desired, or to let the conversation take its natural course. While the groups talked, I circulated among them, spending a few minutes at a time with each, answering questions if they were directed at me, but basically trying to remain as unobtrusive as possible. I had anticipated “being needed” to furnish vocabulary in Spanish, but found that the guest speakers easily assumed the role of teacher, and I became superfluous. After approximately 15 minutes, I had the guest speakers switch to another group and repeat the process. This was no easy feat since the groups were invariably involved in enthusiastic discussions. Each group spoke with three students in a one-and-one-half-hour class. At the end of the class, we reconvened as one large group and spent 10 minutes “reviewing” what was learned about each speaker and highlighting what information the students found most interesting.

Besides being a fun activity, the strategy produced several beneficial outcomes—some expected, others a surprise. For the students enrolled in the Spanish class, it was an opportunity to have firsthand contact with native Spanish-speakers. They were not only able to practice their auditory and oral skills, but they were also exposed to various accents and diverse vocabulary in the form of regionalisms. They learned about various Spanish-speaking countries—Argentina, Puerto Rico, and Mexico. They learned firsthand from these students what it is like to live in a foreign country (the United States) and the difficulties they encounter in attempting to assimilate into a fast-paced technological society, while possessing limited English skills.

The general studies students also benefited from the experience. As many of these students, due to their limited English, tend to be somewhat shy in class and at times self-deprecating concerning their abilities and progress, I was concerned that they might not feel competent enough to lead small groups of students, even in their native language. However, they were so well received that they immediately showed self-assurance in taking on a professorial role with the small groups. This newly-found confidence seemed to carry over into their work in our general studies class. They
became more vocal in class and more willing to ask questions and seek help after class, and I saw a reduction in the self-deprecating comments.

To my surprise, the students were not the only ones to benefit from this exercise. Through my eavesdropping on the groups, I learned a great deal of personal info about my students. This insight into their background and familial situations helped me to understand and empathize with problems some of them were having in class. One student's frequent absences were not due to lack of interest, as I had suspected, but rather to pressure by his family to work more hours in their Mexican restaurant. Another student's apparent apathy in class had nothing to do with disliking school, but rather with her despondence over the breakup with a boyfriend. Students may not be willing to divulge such personal information to a teacher, but they had no problem discussing it with other students and did not seem to mind that I might “overhear” it.

This cultural and linguistic exchange can easily be used in any language class, providing that native speakers are available and willing to participate. Even if the class teaches a language not as common as Spanish, students will often know someone who speaks the language being studied, or have a relative fluent in the language who may be willing to come to the class as guest speaker. If only one speaker is available at a time, a variation on the small group technique can be used. The lone speaker can present a short talk to the whole class in his/her native language, and the students can be prepared to ask questions. But in order to maximize contact among students and the speaker, and in order for “real” communication to take place, students should break into small groups after the presentation. In their groups they can review among themselves the material covered in the presentation, as well as clarify any misunderstanding, or lack of understanding, they may have. There will always be a student in the group who understands more than the others and is willing to share this knowledge. While the groups are in progress, the guest speaker and the teacher can circulate among them to answer questions.

Other than the obvious benefits of increased communication across cultures, many stereotypes can be dispelled by having face-to-face encounters with speakers of other languages. Students come to realize, as they communicate in a common language, that although we bring different cultural experiences with us into adulthood, there are obvious commonalities across cultures that allow us to see that we are not so different after all.

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Breaking Down Barriers

As community college faculty, many of us are aware that a significant number of students enrolled in our classes have emotional barriers to learning (EBTL).

I know that my discipline, art, often is the place where students with EBTL find sanctuary. Many bright students who are not achieving at their potential often select art classes to avoid the so-called “tough” courses. As an art educator, I have covertly addressed emotional barriers to learning throughout my career.

In 1988 I took direct action. I requested a sabbatical leave to pursue an additional master’s degree for the training and credentials to address these barriers directly and to provide students with a vehicle that would help them help themselves.

Upon my return, I initiated a pilot program. Two years have passed, and my program is showing significant success.

Innovation

With the support of the Hagerstown Junior College administration, I designed and implemented a model using art therapy to address EBTL.

As the art therapist/educator, I receive referrals from the Director of Counseling and the VSST Handicapped Program Coordinator. I interview these referrals and determine (1) their readiness to spend two to three hours a week in individual or group settings, and (2) their commitment to use art materials as the vehicles for confronting their EBTL.

The model uses the semester format and adheres to the strict confidentiality of therapy. The sessions are held weekly for one-and-one-half to three hours, depending on the number of participants. A maximum of six participants work with one art therapist/educator. Both directive and nondirective art experiences are provided during and between the sessions. Participants contract with the art therapist and/or the group as part of their commitment to work on issues that contribute to their EBTL. Using a visual/verbal model and a diagram with words that sometimes are modified to adapt to language skills, group members informally learn visual language skills. The art becomes a concrete tool (the record) to see how they move and develop through their personal process in addressing EBTL. Both investment or potential for insight are essential in this model.

The group setting provides each participant with a nonthreatening environment in which to examine the implications of EBTL. Members are affirmed for their willingness to experiment with art materials, even though most of them have indicated that they “cannot draw a straight line” or “can barely draw a stick figure.” Learning that one does not have to be a talented artist to express oneself visually and finding that self-expression builds self-esteem naturally contribute to overcoming or controlling EBTL.

Growth in self-esteem is accomplished by focusing on the process of creating, while not being overly concerned with the product. The setting is essential because success is limited and ordered, while creative actions are facilitated by the art therapist/educator.

The art therapy group members develop a visual record of the history of the group experience, and they have a supportive and contained setting in which to take responsibility for becoming educated. The participants receive peer support when they try new behavior. They are encouraged to develop and demonstrate honest communication—both positive and negative. As a result, they experience personal growth.

Identifying Students

Potential participants for the individual or group art therapy experience are those students who have been told or sometimes believe that they can be achieving more and doing better in school. They generally have no difficulty understanding life-related concepts or new information, and they acknowledge their experienced inability to do well in school.

Participants have been varied. A sample list of participants includes (a) first-generation college students, (b) Vietnam veterans, (c) adult survivors of sexual assault and/or emotional and physical abuse, (d) people sent for vocational rehabilitation, (e) individuals currently in therapy off campus and in need of an anchor on campus, (f) adults with lifelong physical and emotional disabilities that previously limited or distorted their access to experiences in the formal school setting, and (g) students who express fear of education (such as taking tests, communicating with
instructors, speaking in front of others, interacting socially, and developing their own creativity). All of these individuals desire to overcome the barriers and do well in school.

Evaluation
As part of the assessment of our pilot program, the VSST Handicapped Program Coordinator sends an anonymous questionnaire to participants, asking them to evaluate the program. Consistently, the ratings are 9 or 10 on a scale of 0-10. All participants recommend its continuation, and more than half request that the program be expanded to include an additional semester. They say that they would participate again and that they have made significant changes in their school and personal lives.

I interpret the request for an expanded program to indicate that while the experience is positive, many students recognize that one semester is not enough time for a person to develop adequate self-confidence. Other students see the experience as valuable and do not feel a need to continue after one semester. This indicates that the nature of the program is not building dependency but, rather, is beginning to address the emotional issues that are barriers to learning.

Budget
Currently, HJC is not budgeted for an ongoing program using art therapy to address EBTL. But in fall 1990 I offered “Art as Introspection,” through continuing education, and a three-credit course, “Art and Self” (with transfer credit potential). In this way, we are responding to the student/client request for expansion as we work within our budget.

The continuing education art therapy groups are intended to help students who are at risk of dropping out of school and need a forum in which to work on issues that block learning. We want the groups to be accessible but not free; therefore, students will be charged a minimum fee of five dollars to register. The college’s VSST Handicapped Program will pay my professional fees for art therapy services. Students will initially self-select and then be interviewed.

In “Art and Self,” students do not discuss personal emotional issues that get addressed in therapy. Instead, students are given an introduction to the structure of visual language and develop cognitive skills. Students contract to spend time doing art study on a course in which they want to do exceptionally well. The art time is in addition to the normal study time for the selected course. Students observe their patterns in the visual images and learn about their personal process. [The course uses Rhyn’s research that addresses the visible structure and not the emotional or symbolic level of the visual language.]

Students are graded on their ability to observe their motivation process, their methods of processing information, and their ability to develop critical observation skills. They write a mid-term plan based on their critically observed process and then an end-term evaluation of the plan. This course format is for students who want to understand their personal learning process and who desire to improve their achievement through these insights.

In the winter and the spring, we will take an in-depth look at our modification, assess the impact of these two changes, and plan our next steps.

Proposition
My perception is that the significant success of this small number of students is not coincidental nor circumstantial and that my model will work with both homogeneous and heterogeneous populations. My plan is to continue using the art therapy model to gather information that will either confirm or modify my judgment. Our hope is that the modifications will evolve into a design for providing this service to all interested students.

Roz Rutstein, Associate Professor, Art
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Suanne D. Roueche, Editor
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Thinking and Working Like a Scientist

It is not unusual for students to take courses in which they learn about the products of scientific endeavors. At the University of Rhode Island, Honors students have had the opportunity to see how scientists actually work.

"Thinking and Working Like a Scientist" was first offered as a special laboratory in a freshman zoology course, then expanded into a stand-alone Honors offering. It draws primarily science students, but there have been a scattering of business and humanities students as well.

The catalog description of the course advises students that they should not enroll unless they feel comfortable working by themselves in ambiguous circumstances; in this way only students who will thrive in the decidedly free-form environment of the course bother to sign up.

Each week of the course focuses on a personal attribute necessary for a scientist, and there is an exercise that will allow the students to demonstrate that attribute. Thus, we have an Initiative Week, Patience Week, Persistence Week, Logic Week, Creativity Week, Resistance to Rejection Week, Verbal Communications Week, Written Communication Week, field trips to working scientific labs, and a Day with the Pros—in which the students work side-by-side with someone who makes his or her living as an applied scientist.

The core of the course is the Thought Log. The instant the students receive an assignment, which they usually draw by lot, because luck is an important component in science, they are expected to jot down in the Log what their first thoughts were about how they would solve the problem of an assignment. If that approach doesn't work, or if they reject it before even starting on that line of direction, they are supposed to enter that information also in the Log. After the assignment is completed by all the students, we discuss the Logs to see what the thought process was that led to the speediest solution.

The semester starts off in dramatic fashion with the Initiative Week. Scientists, especially newly minted ones, have to be scroungers and be willing to ask favors of people—to borrow equipment, share data, compare techniques, etc. In the first week, then, each student receives a scavenger hunt type of assignment. Examples include, "Bring me exactly 100.00 grams of camel dung, dry weight." Here the student has to somehow persuade the zoo to give him the material; then he has to find an oven and a balance. "Here is a length of yarn. It is very unusual. As a matter of fact, it can be found in only one place in the state of Rhode Island. Bring me another piece." It took one student 16 hours; starting with the University's textiles department, she identified the yarn, but then she had to figure out that if it could be found in only one place in Rhode Island, it had to be some kind of industrial yarn, rather than a home knitting yarn.

Other initiative assignments include bringing in exactly 10 human white blood cells, without any red blood cells, filling a vial with hydrogen sulfide, and obtaining the signature of the governor of Rhode Island.

Much of science involves repetitive work, a characteristic which does not appear on Jacques Cousteau or Carl Sagan programs. For the Patience lab, students are given a one-pound box of birdseed which contains three types of seeds. The assignment is to tell me, with an accuracy of five significant figures, what fraction of the whole is millet, canary, and oat seeds. To satisfy the requirement, the students have to somehow separate and then count all 74,000 seeds in the box. This assignment is fascinating, because the students immediately sort themselves out. Some phlegmatically get a camel's hair brush, sit down, and have at it, emerging 20 hours later with the answer. Others say to themselves "no way," and spend hours trying to devise some kind of mechanical separator, using sieves, fans, water, etc. In the postmortem of the exercise, the students say they hated it all the time, but found that it was the most revealing of all the exercises during the semester.

The Resistance to Rejection assignment is not labeled as such. Scientists are always having to submit manuscripts and grant proposals, and experiencing rejections, from which they must recover and try again. The students here are given a small library research paper which they are to submit to me. I return it to them with the comment, "This is no good. Try it again, but with more detail." When they resubmit, I say, "Better, but
it's too cluttered. Simplify it. Do it again." Most of the time, their reactions are unprintable. After the third submission, I show them collections of NSF, NIH, and journal referee commentaries, all of which are contradictory. We then discuss strategies for keeping one’s sanity in these conditions.

The Oral Communication week is the most traumatic. Acting as a committee of the whole, the class has to give a freshman biology lecture—to 300 fellow students. Each Honors student has to speak for about seven minutes. Afterwards, we discuss scientific communication, professional meetings, speaking under stressful conditions, and public speaking techniques.

During Day with the Pros week, pairs of students spend a day with a surgeon, a vet, and a pathologist. The task is to see how much science these people use in their daily professional activity, considering that almost the whole of each pro's training was in science. The students are amazed at the small amount of science they see compared to business, psychology, and running around. To balance this, we spend some time on a research trip conducted by the local aquarium.

At the end of the semester, we review some of the great scientific discoveries which have been documented in human terms, such as the discovery of the DNA double helix by Watson and Crick. By the time the course is over, science has been thoroughly demystified, but it has been humanized; and the students have a fairly good picture of what a scientist actually does with his or her time.

Frank Heppner, Honors Professor, Zoology

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A Lake Study in the Classroom

After teaching field-type ecology courses for almost 30 years, I was asked to develop a two-semester, non-science major, freshman biology course. Since I couldn’t think of a more important group of students with which to work, I accepted the task with enthusiasm. I soon realized that the hands-on type of lab approach I had been using for so long would present a challenge in the confines of four walls, with only electrical and water outlets connecting me with the outside world.

I decided to bring that world inside. First, I bought an eight-section wallpaper mural and placed a mid-south hardwood forest on one wall of the lab and posted outdoor scenes on the other three walls. At least we had something to look at and talk about.

Next, I decided that we needed a real lake in the lab, so I went to a local park and took slide photos from the top of the watershed down to the very edge of the lake. I then borrowed a fresh water ecology exercise from the U. S. Forest Service (Investigating Your Environment Series, 1976) and modified it to fit my students' needs.

I begin the lab with a succession of slides of the lake, as if we were walking down the hill to the water. We discuss signs of beaver activity and weather conditions; we ask—"Is the lake a natural or a man-made community?"; we look for evidence of possible fishing activity and what that implies; and so on. The students take notes as though we were on an actual hike. Then students turn their attention to an aquarium stocked with the necessary flora and fauna to complete the study. With the necessary tables provided, the students can estimate the dissolved oxygen and pH of the water. Once the students have made their observations and recorded their predictions, they check their work with a relatively inexpensive Hach Water Test Kit.

I find that the students and teaching assistants enjoy the experience, and we all get to spend a couple of hours "out of doors" as well. This simple activity could be expanded or modified to investigate soils, sand dunes, forests, deserts, or any other habitat. The emphasis is on the scientific method of observing, recording, hypothesizing, and testing.

Neil A. Miller, Professor, Biology

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Celebrating Teaching Excellence: An SPJC Perspective

Within a period of five years, more than 300 St. Petersburg Junior College (SPJC) faculty, including department chairs, have had the experience of attending the NISOD International Conference on Teaching Excellence. These single experiences have accumulated into a collective professional development account that pays interest to the college in the currency of renewal, camaraderie, and ultimately a better education for SPJC students.

SPJC's comprehensive faculty participation in the annual NISOD International Conference on Teaching Excellence began as a recommendation from faculty leadership. Individual SPJC faculty members had attended the conference and found it to be an outstanding professional development experience. Consequently, in 1987, Faculty Governance Organization leaders raised the idea of providing all full-time faculty members with the opportunity to attend. This recommendation came at a time when the college was reviewing its staff and program development activities and looking for ways to improve faculty participation in professional development.

The review revealed that not only was a small percentage of faculty and staff attending professional conferences but that for the most part the same people were participating each year. A special effort was needed to involve the high percentage of veteran faculty on continuing contract who were not active or marginally active in professional development. That special effort would have to be in quality activities that pertained to teaching and learning. The NISOD conference appeared to offer the quality and comprehensiveness on which to center such a major professional development initiative.

Responding to Faculty Governance interest, the District Board of Trustees agreed to support with Staff and Program Development funds and auxiliary funds the commitment to provide the opportunity for all full-time faculty, over time, to attend the NISOD Conference on Teaching Excellence. As the plan was put into action, every effort was made to contain costs. To offset transportation, hotel, and registration costs, the college negotiated special prices. The airlines discounted fares as much as 70%. Hotels and NISOD reduced rates and registration fees for this large number. Faculty members paid for their meals and lodged three to a room.

In addition to containing costs, the college built in accountability. Attendees submit evaluations and discuss how better to enhance the value of the experience in improving instruction and services at SPJC. Faculty members report in discipline meetings and other settings on useful programs and practices they encountered at the conference.

Primarily veteran faculty members composed the first group attending the NISOD conference, and their responses indicated that their participation achieved the main goals of the initiative: their experiences, told to other faculty and staff, made going to the conference a highly visible, very worthwhile, and "special" professional development project; and their enthusiasm generated excitement among their colleagues.

The positive experiences of each succeeding group have continued to confirm the value of this professional development initiative to the college. The experience has increased morale and has resulted ultimately in better working relationships college-wide. Other direct benefits have accrued:

- The activity is important in fulfilling the Southern Association of Colleges and Schools (SACS) professional development requirement for accreditation.

- Faculty and staff have the opportunity to learn about teaching techniques and educational practices that can benefit students and improve SPJC's effectiveness.

- Attending the conference has led to faculty and staff organizing "mini-NISOD" staff development activities on their own campuses for their colleagues—formal presentations and sharing of materials about selected presentations faculty attended at the NISOD conference. Information and knowledge are brought back and used to help improve education at SPJC.
Faculty and staff have the opportunity to interact with their peers from community colleges nationally and internationally, thus learning about other practices and programs and establishing helpful networks. This results in SPJC faculty and staff being introduced to the latest practices and technologies, as well as having a basis of comparison by which to recognize their and SPJC’s own strengths and points of excellence.

Providing the opportunity for faculty and staff to attend the conference rewards employees for good work.

Giving faculty and staff members the opportunity to attend the conference is a highly visible sign of SPJC’s commitment to faculty development.

One final note: From the beginning, SPJC viewed this professional development initiative as an investment, and it has paid dividends. Its continuing priority was reaffirmed this year when the budget crunch required reductions. The Faculty Governance Organization and the District Board of Trustees concurred in maintaining the commitment to send faculty to the NISOD Conference on Teaching Excellence, with the cost of attendance covered by auxiliary funds, rather than by general tax revenues from the state appropriation. This action underscores, once again, SPJC’s continuing belief in NISOD conference participation as one of the best investments in faculty and staff development in America.

W. Jack Crocker, Associate Vice President, Educational and Student Services

For further information, contact the author at St. Petersburg Junior College, P.O. Box 13489, St. Petersburg, FL 33733.

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INQUIRERE: A Program for Enhancing Academic Growth

Traditionally, independent study is designed for the junior and, preferably, the senior level of undergraduate study, while sophomores are encouraged to "watch." However, applying one's knowledge and abilities should be encouraged at any stage of education. At Waldorf College, a two-year liberal arts college where sophomores are our "seniors," we have developed a program for motivating sophomores (and sometimes freshmen) to apply and to demonstrate their academic achievements.

Athletics and the fine arts have always provided Waldorf students with opportunities to demonstrate their abilities in traditional academic disciplines. Such opportunities make these areas exciting by bringing the students out of the classrooms and into the public arena.

In the spring of 1988, two biology students completed separate, independent study projects which were conceptually excellent and achieved significant results. I was impressed not only by what the students learned, but also that they had begun to discover about learning and, specifically, biology. The students were excited about their success, but the college had no forum for presenting such academic achievements. Consequently, we reserved our large lecture hall for an evening Science Seminar and invited the college community and the public. The audience was small, but some key individuals attended, including the science faculty and a number of college administrators. They were impressed by these students' presentations and by the concept of public presentation of students' scholarly work.

The following year, we created the INQUIRERE program to give capable and motivated students from across the curriculum a forum to publicly demonstrate their academic achievements. INQUIRERE is a multi-faceted, interdisciplinary program which provides not only a public forum for our students and enhances the intellectual life of the campus, but also involves the college and surrounding communities in the careful consideration of issues of national and global concern.

The first aspect of INQUIRERE highlights student achievement. When students register for spring classes, interested and capable sophomores are encouraged to register for independent study. They consult with an advisor in the discipline of their choice and then begin to research a topic for study. They consult often with their advisors, but independent work is stressed. Then, during INQUIRERE Week in late April, these students present the results of their individual studies in a seminar format on Monday, Tuesday, or Wednesday evenings. Faculty engaged in research also present seminars, thus promoting an atmosphere of collegiality with the students. Time limits for the individual presentations, including time for questions, are 20 minutes for students and 30 minutes for faculty. Students are challenged to stay within this time limit, but can do so with careful preparation and coaching by their advisor. Recognition is given to the individual advisors by asking each to introduce his/her student.

At first, we were concerned whether sophomores would be prepared for an examination of this degree, but we have been overwhelmingly pleased with the topics chosen by our students, by the quality of their work, and by the maturity of their presentations. Our students have researched and presented papers on "Music Works: History and Performance"; "Russian Icons"; "Documentary Photography: Life After Retirement"; "Effects of Pheromones on Gerbil Memory"; "Musical Composition: Freedom Through Restriction"; "Hair Structure: An Application of Forensic Science"; "Backyard Pollution in Iowa"; and "Applying Computers to Education," among others. Students show a great interest in and an ownership of their individual topics. Generally, they stimulate interest among their peers, faculty, and the audience; and they handle questions well.

A second aspect of our present INQUIRERE encourages college and community interaction with distinguished scholars on current issues. On Thursday morning, scholars with divergent views address an all-college convocation. That evening, they convene for a moderated forum that engages the college and the community in active participation.

In 1989, we invited a theologian and a neurologist (both Christian) and a scientist (an atheist) to discuss...
the relationships between science and religion. In 1990, in conjunction with Earth Day, we invited an ecologist, a historian/theologian, and an agricultural economist to discuss wealth distribution and resource stewardship. In 1991, in conjunction with the two-hundredth anniversary of the Bill of Rights, we plan to invite scholars to discuss the First Amendment.

This aspect of INQUIRERE, besides being popular and attracting citizens from the local community and beyond, has the added element of being festive. The guests are present on campus throughout the day and attempts are made to acquaint them personally with students, faculty, and administration. The visitors are present for an informal luncheon in the Campus Center; faculty are encouraged to invite them to address afternoon classes; and prior to the evening forum, participating students, faculty, and community dignitaries are invited to a banquet honoring these scholars. The banquet is informal and designed for the visitors to mix with the college and community members. A brief program introduces each scholar in a light, personal way. Finally, after the evening forum, a faculty reception at the Waldorf President's residence honors the visiting scholars, the faculty, student scholars, and their advisors.

We have been careful to design INQUIRERE as a positive encouragement. Student scholars are not graded for their presentation, per se; their advisors grade them for their independent studies. Instead of a grade, a faculty committee constructively evaluates their presentation. Presenters are also videotaped and encouraged to review their presentation.

Not every sophomore is interested in or prepared for participation in INQUIRERE, nor is independent study/INQUIRERE intended for every sophomore. Although INQUIRERE was designed for any motivated and capable student, it is often an attraction for the honors students. Although other students do present at INQUIRERE, it is primarily utilized by the Honors Program. We are careful not to equate INQUIRERE with the Honors Program, even though INQUIRERE currently depends almost entirely upon the willing participation of honors students. It is intended to attract the participation of any capable student who has successfully completed an independent study course and to encourage intellectual curiosity and growth among all students.

INQUIRERE has become one of the academic highlights of the year. Students are beginning to plan ahead for their independent study topics, and faculty are beginning to ask what the next INQUIRERE theme will be. Most important, we have begun to realize the scholarly potential of our sophomores. They are not yet seniors, but they are developing an attribute prized even at the senior level—the ability to think and to express that thinking effectively in a public setting.

Paul E. Bartelt, Chairman, Biology

For further information, contact the author at the Department of Biology, Waldorf College, Forest City, IA 50436.
The Writing Center: A Center for All Disciplines

When educators discuss writing centers, they usually refer to a lab setting with writing tutors available for students enrolled in writing classes, particularly developmental writing classes. But a writing center should be an interdisciplinary facility. With the focus of education on cultural awareness and on literacy, colleges are faced with the need for centers of learning that provide students with multifaceted learning opportunities. One such center is the interdisciplinary writing center—a center that provides students a setting for cross-curricular writing assistance.

Community college students need somewhere they can go for help in writing for any discipline—a place where they can feel comfortable asking for suggestions on how to get started on a paper, how to punctuate, and how to document correctly. Many writing centers provide assistance on freshman composition papers, but few provide assistance for writing assignments in other general education or elective courses.

Today more instructors are including writing in their classes, and students are looking for ways to meet the criteria delineated in these different writing tasks. Students must now not only write for Humanities classes (expository essays, critical analyses, book reviews, music critiques, literary analyses, and research papers), but they must also write for social science classes (expository essays, causal analyses, outlines, summaries, abstracts, research papers), for natural science classes (descriptions, process analyses, lab notes, summaries, abstracts, research papers), and for health science classes (lab notes, summaries, abstracts, nursing care plans).

Students need a place to go for writing assistance—a place that provides tutoring to help them understand how to meet the specific demands of different audiences and purposes in their writing. So, the question remains—how does one make the college writing center an interdisciplinary writing center?

First, directors of writing centers should hire tutors, preferably full-time, to work in the writing center. These tutors should have a minimum of a B.A. in English or Composition and should be selected according to the following criteria:

- a determined level of proficiency in writing,
- some knowledge of the composing process,
- some experience with nontraditional students,
- an understanding of the needs of nontraditional students, and
- an awareness and some understanding of interdisciplinary writing.

Since consistency is important in order to maintain a continuum for students, and in order to provide an area consistently conducive to the development of writing skills, these tutors need to work regular hours.

Second, directors of writing centers should draft faculty tutors from the Humanities, as well as other disciplines. This is relatively easy to do. Directors can meet with division or department chairpersons and request a few minutes of time at a division or departmental meeting for a discussion of the writing center's "new role" or new direction. They can ask colleagues who are friends to "be brave" and volunteer to tutor. They can seek out new faculty members, particularly tenure-track faculty eager to fill a curriculum vitae with innovative items. Above all, they can be honest and clarify their intentions, their long-range goals, and their emphasis on meeting the needs of students.

Third, directors of writing centers should make the prospect of tutoring in this center attractive to faculty members. They should consider what "perks" they can offer. In some instances, depending on the performance review structure, faculty members feel intrinsic rewards and feel that they earn intangible credit, nonvisual "feathers in their caps" for this involvement with students. Faculty members often receive letters of evaluation at year's end—letters that not only acknowledge the faculty members' participation as tutors, but that also verify advising or conferencing credit needed to satisfy contract agreements. Whatever the situation, directors can make this tutoring more than just intrinsically worthwhile for faculty members.

Fourth, directors of writing centers should provide hired tutors and faculty tutors with an orientation session at the beginning and a sharing session at the end of each semester. The focus in these orientation sessions should be on the following:
The goals of the writing center, the general policies of the center, ways to meet student needs, ways to encourage colleagues to make student referrals, and schedules—making sure to "spread out" or balance faculty tutoring as much as possible. These beginning orientation sessions should include ideas about typical writing assignments, methods for working with developmental as well as advanced writers, ways to help students develop self-confidence as writers, tactics for dealing with students who want editors, and diplomatic and sensitive ways to work with students who may have acquired assistance in the writing center, but who, nonetheless, did not receive the A's they wanted. The sharing sessions at the end of each semester should simply put into focus the accomplishments and/or problems of the center in relationship to the goals presented at the beginning of the semester. This can be a fine justification for an open-house sharing with faculty tutors, as well as with faculty members not yet involved with the writing center.

Fifth, directors of writing centers should have available, contingent on budget, at least some of the following resources for student use:

- handouts on writing in the Humanities, the Social Sciences, the Natural Sciences, the Health Sciences;
- dictionaries (unabridged, etymology, foreign language [Latin, French, German, Spanish], literary terms, social science terms, medical terminology);
- style manuals—MLA, APA, the University of Chicago Manual of Style, CBE Style Manual (Council of Biology Editors), Handbook for Authors (American Chemical Society), A Manual for Authors of Mathematical Papers (American Mathematical Society), and Style Manual for Guidance in the Preparation of Journals Published by the American Institute of Physics (for health sciences);
- sample assignments and papers from various disciplines.

For writing centers with computers, there are useful software packages available: e.g., word processing programs and tutorials that focus on the process of writing; on causal relationships; and on logic, reasoning, analysis, and synthesis of ideas. The purpose in providing these resources for students is to make available to them a center as conducive to writing as possible. Students writing analyses of a play should have access to a dictionary of literary terms; students writing sociology reports should have access to a dictionary that provides definitions of social science terms; and students writing nursing care plans should have access to a dictionary of medical terminology.

Finally, directors of writing centers should advertise to students the goals of the center, the resources available, the types of assistance available (for example, help with writing, editing, word processing, etc.), the names of the tutors and faculty, and the hours for the center and for "specialized" writing help. Above all, they need to let students know that the center is an interdisciplinary setting conducive to learning about writing and that students from all levels of all disciplines are welcome. Directors also need to inform faculty members of the same—via memos, in-house publications, or division or departmental meetings—and to encourage them to refer (bring) their students to the center. A community college writing center should be, and can be, a successful interdisciplinary writing center for all students.

Pam Besser, Coordinator, Writing Center

For further information, contact the author at Jefferson Community College, Downtown Campus, 109 E. Broadway, Louisville, KY 40202.
Take a Seat: Take a Stand!

In the traditional "lecture-discussion" approach, the shift from one mode to the other is too seldom evident to more than a handful of students. Most continue to gaze idly as teacher-talk gives way to an interchange between the instructor and a few of their more vocal counterparts.

Why such passivity? Partly, I suppose, because the customary "Any questions?" hardly invites involvement. But more, I believe, because many undergraduates, particularly in community colleges, are afraid to test their ability to defend positions on age-old disputes in the humanities and social sciences.

Clearly this is true of most of the students who have ventured into my sections of Introduction to Philosophy. Heading for the back of the room on the first day of class, they make it clear that they would far prefer quiet notetaking (or snoozing) to active engagement with philosophical issues.

My observations on their choice of chairs, however, suggested a technique I have found useful in getting them more involved. What I have done is simply rearrange student desks and make use of the chalkboards which line the classroom so that every student takes a stand simply by taking a seat. Once students have defined a viewpoint, of course, they are quite literally positioned to defend it.

Sample Issue

Science and the Search for Ultimate Truth

Early in the quarter we read excerpts from an essay by American pragmatist Charles Sanders Peirce. Extolling scientific reasoning over more common ways of settling opinion, like appeals to personal prejudice or the force of authority, Peirce slyly but repeatedly injects digs at religious faith into his argument: "If it be true that death is annihilation, then the man who believes that he will certainly go to heaven when he dies, provided he has fulfilled certain simple observances in this life, has a cheap pleasure which will not be followed by the least disappointment." On no subject do most of my students claim to feel more passionate than on religion, but Peirce's sarcasm usually passes them by...until I demand they take a stand (or a seat) on it.

A New Classroom Configuration

The day after students have read and reviewed the Peirce selection, my classroom takes on a new look. Chairs are divided into three clusters, each grouped beneath a sign on the chalkboard: (1) Sit up here if you can defend your belief in God on what Peirce would consider scientific grounds. (2) Sit back here if your faith in God rests on what Peirce would consider personal prejudice or appeals to authority. (3) Sit over here if you don't believe in God or doubt that God exists.

Everyone in class has now taken a stand on a crucial issue of modern philosophy: Can scientific reasoning resolve metaphysical questions? Perhaps a third of the students bravely wait under the first banner. Most of the others have settled uneasily under the second. Both groups glower at the few who have chosen option three.

Defending a Stand (Seat)

Having taken their stands, they must now defend them. To maintain universal participation, I preface each phase of the discussion by requiring that defense in writing. The scientific believers have the most obvious task: explain the basis for your faith. Once they present their positions, the skeptics are invited to counterattack. If Peirce is right that science is public truth, "such that the ultimate conclusion of every man shall be the same," the scientific believers have a problem.

The group in back is now on edge, and rightly. The question they must address is this: Peirce calls your crowd ostriches who hide their heads in the sand to avoid facing reality, intellectual slaves who let others think for them, fools who cannot put two and two together for themselves; has he discovered the truth about you?

Chairs (and Minds) Begin to Move

By this time students are not only shifting uneasily in their seats but actively questioning the stands which put them there. Some actually move their desks to
another section of the room. Even more begin to question Peirce's unqualified endorsement of science as the sole method of seeking truth. A simple room rearrangement has brought to life a central issue of epistemology which will occupy the class for much of the quarter.

Hidden Benefits of the Exercise

Raising questions about serious issues which affect students' sense of themselves and their place in the world (and what issue does that more than the question of God's existence?) is necessarily touchy. Ordinarily, those few students willing to voice unpopular opinions suffer for them. But when every student is forced to take a stand, and no stand emerges as the clearly "correct" one, pressure to conform gives way to the challenge of critical thought. In addition, critical thinking is now associated not with tense confrontations but with the fun of shifting chairs, a spirit of levity the instructor can easily reinforce. (I like to close the day's discussion of Peirce by raising the projection screen I've pulled down to conceal the chalkboard annotation behind my own chair: Sit up here if you ARE God.)

Not every classroom at Atlanta Metropolitan College has as many chalkboards as the one in which I prefer to teach philosophy, and I have to fight the math instructors for it. In other classes here, teachers sometimes adapt the technique with hand-lettered posters directing students to particular areas of a classroom, but chalkboard directions are quicker and easier. Still, set-up time is a concern. Ideally, the room should be ready before most students arrive for class, not always an easy task when back-to-back scheduling is the norm. Probably the best room is one with plenty of desks and chalkboards but no class scheduled during the previous hour. I've found that repeatedly leaving my chairs in weird arrangements encourages other instructors—especially the math faculty—to request new room assignments, as far from humanities classes as possible.

Ron Chandonia, Associate Professor, English

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Encouraging Students to Become More Involved Readers

Twenty-five years ago, as a senior at Notre Dame High School in Harper Woods, Michigan, I recall writing a report for an economics class on the book *The Rich and the Poor* by Robert Theobald. On the day the report was due, Fr. Rancourt, our teacher, collected the reports and then collected the paperback copies of our books. We stared in bewilderment at the stack of books on his desk.

After pausing for a moment, Fr. Rancourt asked us why we thought he collected our books. When he didn't get a response, he asked another question: Do you think I can tell who really read the books by looking through them? He then gave us a brief lecture about the importance of marking a book. This lesson made a lasting impression on me.

In my English Composition classes at Hutchinson Community College, I have carried on Fr. Rancourt's technique of examining books. However, my approach differs from his method in several respects. During the first week of class, I quickly move from student to student, looking at the pages of their assigned readings. My students give me the same puzzled look that Fr. Rancourt received when he collected our books. As I look at the texts, I make jokes about how clean some of them look. "Not a mark or smudge," I quip as I glance through a student's text. If I do find some underlining, highlighting, or writing in the margins, I praise the student. However, frequently at the beginning of the semester, many students' texts reveal few or no marks.

When I finish examining their texts, I again move around the room, this time showing the students my text, which is filled with notations, underlines, and other types of marks. After doing this, I comment on the importance of marking a book.

My main point is that marking a book gets the reader more involved with the text. Involvement, I stress, is one of the main factors in becoming a successful student. In "How to Mark a Book," Mortimer J. Adler writes about the importance of involvement:

> If, when you've finished reading a book, the pages are filled with your notes, you know that you read actively... The physical act of writing, with your own hand, brings words and sentences more sharply before your mind and preserves them better in your memory.

Adler contends that "reading a book should be...a conversation between you and the author.... And marking a book is literally an expression of your differences, or agreements of opinion, with the author." Most of my students agree that underlining improves retention and assists in reviewing for a test. However, few students write comments in the margins that express agreement, perplexity, and so forth. When a reader writes comments in the text, he becomes an active participant in what he reads. The act of writing forces the student to slow down and consider what he reads. I also mention to the students that how thoroughly the text is marked depends upon the complexity and importance of the reading material.

This semester, after I showed a class the underlining and notations I made of Flannery O'Connor's short story, "Everything That Rises Must Converge," one of my students asked me why I marked the story in pencil, red ink, two shades of blue ink, and black ink. I used this question to get into a short discussion on the concept that great literature should be read more than once. Each time a person reads an outstanding work of literature, he often finds new ideas and modifies old ideas. When I read O'Connor's story for the first time, I used a pencil. On the second reading, I happened to have a red pen. With each new reading over several semesters, I added comments, reconsidered previous remarks, and, in a sense, became a better student of the story.

My students should see how I read a story or essay. When I write an article, I show students my numerous rough drafts to let them see that I have struggled for a finished paper. The same principle applies to reading. I want students to notice that I read thoroughly and involve myself with my reading. I expect them to do likewise.

In one of my composition classes, I recently looked at my students' texts for the third time. (I don't check their books during each class session but rather check...
randomly about 10 times each semester.) During this third check, I noticed that some of the students were beginning to underline passages and write notes in the margins. One student had more notations than I had written in my text.

My technique for encouraging students to become more active, involved readers has two advantages. First, it doesn’t take much time. Before I begin a lecture or discussion, I can usually look quickly at every text and show the students several pages of my text in about five minutes. (On average, there are 17 students in each of my writing classes.) Another advantage is that nearly all content area instructors can use this technique and modify it in a number of ways.

It can work well in such diverse courses as ecology, philosophy, psychology, and art history.

I do not force my students to mark their texts, and I never check to see what they underline or write in the margins. My purpose in checking their texts and showing them how I mark my texts is to encourage an involvement with what they read, and I hope that such involvement will become a habit.

Bob Gassen, Instructor, English

For further information, contact the author at Hutchinson Community College, 1300 N. Plum, Hutchinson, KS 67501.

Using Crib Cards: Developing Study Skills

I have tried many ways to help students become better at studying for tests and at taking tests. Recently, I hit upon a scheme which seems to be valuable to my students and which has the potential for teaching them some much-needed study skills. The scheme was this: About 10 days before the first major test, I told the students that each could bring one 3 x 5 card, with anything written on it, to class and could have access to this “crib card” during the test. (I also told them that any card larger than 3 x 5 would be cut to size!)

On the day of the test, all students arrived with their cards. Some had written notes in such tiny print that they couldn’t have been read without a magnifying glass. Some had written on both sides, some on one side only. I noticed that students exhibited an unusual excitement and camaraderie as they came in to take the test, and there was more conversation and less anxiety than usual.

After this test had been graded, handed back to students, and discussed, I asked the class to tell me how they felt about the crib cards, how the cards affected their test taking, and what they learned from the experience. The most common response was that once they had completed the card, they no longer needed it to do well on the test. Some said they hardly gave it a glance, but knowing it was there helped their confidence. Others said it was the first time they had ever done anything to study for a test other than reading over the material. All agreed that the synthesizing and outlining required to make maximum use of the 3 x 5 space was what helped them most. Some realized for the first time that there was a need to identify and prioritize the most important material. Students have indicated that they plan to use the crib card method to study for tests in other classes.

Claire Gauntlett, Evening Dean

For further information, contact the author at Cedar Valley College, 3030 N. Dallas Avenue, Lancaster, TX 75134-3799.
Terrified Freshman Authorities: 
A Collaborative Learning Experiment

In my mind I must have quit graduate school at least 500 times out of fear and frustration. I longed for a written handbook that went beyond the schedule detailing when drafts of my thesis were to be submitted. What I wanted was for a student who had already been through the same experience to say, “I was as scared as you. Here’s what really works.” And then this imaginary friend would help me get my deadlines in perspective. Our students are no different. Here is one way I’ve found to retain “high-risk” students: Give them the chance to produce a document that would serve to orientate and comfort other frightened freshmen; make them the authorities of campus survival.

“If you were a freshman who had never before been enrolled in a college-level course, or, for that matter, had ever set foot on campus, would you pick this up and read it?” That is how I set the purpose, audience, and occasion for a newsletter my freshman composition students “published” last semester. The content for the newsletter was derived from their first four writing assignments. These were either short essays or long paragraphs, and they all pertained to and were directed toward allaying the fears of the “high-risk” student.

The first assignment was a description of their favorite instructor on campus who was teaching during the current semester. In the second assignment they helped their imaginary freshman survive either pre-registration, registration day, or the first three days of classes. In a third assignment they argued for reasons to remain enrolled in college courses, using four benefits they were receiving or earning from college attendance. The fourth and last assignment, identified by my students as the toughest, was to decide which class they could recommend to their new-found friend, based upon the applicability of acquired knowledge or skills to situations outside of the class.

After I had graded and edited these paragraphs or essays, I asked students to type them in newsletter form, incorporating the suggestions and corrections I had made. These assignments were to be ordered in the newsletter in much the same manner as the traditional argument, with the weakest sandwiched in the middle and the strongest on each end, thus exercising their evaluation skills. We, as a class, examined professional and student examples of newsletters, and I encouraged them to make use of resources available around campus: typing labs, photos from college catalogs, comic strips from old newspapers, and “fillers” such as snack bar menus, graduation dates, newly-acquired library material, skills development center hours, tutoring hours, and computer lab hours. Thus, students were able to seek out on-campus services to which they normally would not be exposed. They weren’t pushed to use these services, but now they knew they were the authorities as to what was available on campus. Although no real artistic talent was necessary, students used computer programs, stencils, cut-out magazine lettering, freehand, calligraphy, and even colored markers.

Once the individual student had completed and received points for his or her particular assignment, the newsletters moved into the “group mode.” The students’ job as a group was to create the “best” newsletter possible, using one paragraph from each student of each assignment type for a total of four paragraphs. They used a type of contract system in which they identified each other’s strengths as writers/publishers/editors and then agreed to accomplish certain tasks related to the project.

When I graded the original individual newsletter, I awarded the students from 1 to 50 points, 50 being the highest. But when the newsletter went to the group members, they were put in charge of the grading. Each student rated himself or herself from 1 to 50 points, based upon the completion of agreed-upon tasks, cooperation within the group, and leadership. He or she then evaluated the other members of the group, using the same method. The numbers corresponded amazingly well. Even the student who awarded himself a low 10 points was in agreement with the group.

From all that has been achieved by the student in terms of higher-level thinking skills, development of community, heightened reader awareness, and task
completion, it appears as though this project would be extremely demanding for the instructor. It isn't. Both the highly-motivated and the less-motivated students liked the idea of a completed project they could take home to show to their families, and it also served as a remembrance of a semester past. From the comments I received from the students, I could tell they were especially fond of the idea of helping other students who might be as terrified as they were when first beginning their college careers. They were no longer just the passive consumers of information; they were the active producers of information.

The cooperative newsletter began as a critical thinking exercise, but now, after reading student comments, I find it has touched students much more deeply than I ever expected. An excerpt from one student's paragraph says it well:

[In our newsletter] we used our own experiences which are real, not only to us, but to others as well. My younger brother read ours and related well to what each paragraph said. He won't be coming to college for a couple of years, but now he knows what to expect, and he looks forward to coming!

Laura L. Jorde, Instructor, English

For further information, contact the author at the Department of English, Clovis Community College, 417 Schepps Boulevard, Clovis, NM 88101.

HAVE YOU MADE PLANS TO ATTEND?

ANNOUNCING NISOD'S FOURTEENTH INTERNATIONAL CONFERENCE ON TEACHING EXCELLENCE AND CONFERENCE OF ADMINISTRATORS, MAY 24-27, 1992, AUSTIN, TEXAS

Pre-Conference Sessions (Sunday, May 24):
- Models for Student Development Programs—Walter Bumphus, President, Brookhaven College, Texas
- Staff Development Programs That Work—Roy Giroux, Vice President, Education and Faculty Services, Humber College, Canada
- Marketing Strategies for Community College Environments—Dennis Johnson, President, Johnson Associates, Illinois
- Critical Classroom Strategies—John E. Roueche, Sid W. Richardson Regents Chair, Community College Leadership Program, The University of Texas at Austin
- How to Charge Up Instead of Burn Out!—Debra Sikes, Instructor, Grayson County College, Texas
- Faculty Mentors: New Roles, Shared Success—Mimi Valek, Vice President for Academic Affairs, Arizona Western College
- Heel & Toe (little or no dance experience required) and Texas Two-Step (some dance experience recommended)—Wally Cox, Professor, Computer Science and Country-Western Dancing, College of the Canyons, California

Featured Speakers:
- Donald Phelps, Chancellor, Los Angeles Community College District, California
- Beverly Simone, President and District Director, Madison Area Technical College, Wisconsin
- Juliet Garcia, President, Texas Southmost College
- Allen Edwards, President, Lexington Community College; and Ron Horvath, President, Jefferson Community College, Kentucky
- Carl Kuttler, President, St. Petersburg Junior College, Florida

Excellence Award Winners Celebration (Wednesday, May 27), hosted by John E. and Suanne D. Roueche

Scheduled Tours:
- Austin and LBJ Library—Saturday, May 23
- LBJ Ranch/Hill Country—Saturday, May 23
- San Antonio and the Riverwalk—Tuesday, May 26
- Mexican Buffet Dinner & Dancing to Texas Fever, Monday, May 25
Involving Administrators in the Teaching Process: A Team-Teaching Approach

As the division head of Professional and Technical Studies at Santa Fe Community College, I am required to administer approximately 15 programs (largely using part-time faculty), as well as to teach one course per term within my division. This is a challenge for me, as well as for other division heads. We often find ourselves torn between the pressing and conflicting demands of administration and teaching, but we must find creative ways of being effective at both.

In past years, I have vowed not to allow my teaching to suffer, regardless of the time constraints. When I have had to prioritize administrative and teaching duties, administrative duties have most frequently suffered the most from low prioritization—I have a profound sense of the responsibility that comes with being an instructor.

For the past semester I have experimented with a new approach to this problem, with some very positive results. I theorized that if I were to team-teach a course with a fellow instructor, the burdens of preparation, grading, etc., would be lighter and would allow me more flexibility to respond to administrative demands. With this in mind, I arranged to team-teach one of our computer-assisted drafting courses with a part-time instructor; my role was primarily “roving tutor” for students who were working in a predominantly hands-on laboratory format.

This approach resulted in the following benefits to students, to my fellow instructor, and to the administration of my division.

• As a “roving tutor,” I have had the flexibility to assist the instructor in paying special attention to students having difficulties with the complex command structure of the computer-assisted drafting program—thus reducing the amount of interruptions to the class without neglecting the “slower” students in the process.

• The experience of working with a part-time instructor on a regular basis has been invaluable. Contact with part-time instructors is generally limited; and the opportunity for mentoring, observing, and providing constructive feedback is rare. My role as a tutor/team-teacher has allowed me to get continual feedback from students on how they are learning and to share this feedback with the lead instructor. My in-class activities provide me with insight into typical problems encountered by students and instructors, and give me the opportunity to develop cooperative solutions.

• Working in the classroom without the constant pressure of lesson plan preparation, paper grading, etc., has provided me with valuable resources (time and information) to use in evaluating the program’s teaching methodology, curriculum, and textbooks—enhancing my administrative decision-making skills in regard to these issues.

Both my teaching and administrative skills have been enhanced by involvement in this team-teaching approach. The time spent away from the office has been spent mentoring, enhancing instruction, and gathering valuable information about the programs. Since I do not have primary responsibility for the organization and leadership of the class, I feel less torn between students and administrative paperwork, class preparation, committee meetings, and so on. The students and the part-time instructor have benefited from this arrangement, as well. The instructor welcomes my observations and assistance, and the students are pleased to have an extra in-class resource for information and encouragement.

Combining teaching with administration creates a wide variety of challenges. But the team-teaching approach provides the necessary flexibility to share talents, to assist in the teaching and learning process, and to enhance administrative skills and resources.

Sheila R. Ortego, Division Head, Professional & Technical Studies

For further information, contact the author at Santa Fe Community College, P.O. Box 4187, Santa Fe, NM 87502.
Sociology: Coming to Life on Videocassettes

My wife, two adolescent sons, and I love to go to the movies together. Viewing and discussing movies are two of our most treasured activities as a family. Many of the students in my classes are also avid movie fans; teenagers and young adults comprise a majority of today's movie audiences.

Two of our greatest ongoing challenges as college instructors are making our classes as fascinating and as relevant to students' personal and academic lives as possible. In order to meet these challenges, I decided to show my students three- to eight-minute segments of recent full-length feature films on videocassette. Obviously, time limitations prevent me from showing entire one- to two-hour movies to the classes. The students seem delighted to occasionally watch a brief vignette from a favorite box-office attraction. When the students view a short passage from a film such as Dances With Wolves, they react positively. It is as if they were encountering old friends again and were reminiscing about cherished memories of the past. I show these short segments of recent movies in order to capture my students' attention, to generate enthusiasm, to illustrate sociological concepts, to provide visual reinforcement for cognitive and affective learning, and to encourage students to appreciate the cinema as an art form. It is my hope that sociology will come to life before their eyes.

In my Introduction to Sociology class, students observe a domineering father planning and controlling his adolescent son's life in the film Dead Poets Society. Can you imagine how an overwhelmingly adolescent audience of college students identifies with the young man, Neil, in this story and emotionally responds to his feelings of powerlessness? In the movie Emerald Forest, students meet a teenage boy who has been adopted by the inhabitants of a lost Amazon tribe and who experiences a rite of passage as he makes the painful transition from boyhood to manhood. As the students empathize with Tommy's ordeal, we as a class explore the purposes of these rituals for young people past and present. The sociological concept of Gemeinschaft—a small, closely-knit, well-integrated community—is beautifully illustrated in the movie Witness, as students watch Old Order Amish neighbors raise a barn in a day on a young couple's farm. The fantasy Cocoon demonstrates that older Americans can and do experience full, rich, and exciting lives. Viewing scenes from this film leads to a lively discussion of our society's collective negative images of the elderly. Stereotypes of the past are challenged, while empathy for the aged is fostered.

In the first minutes of the movie The Gods Must Be Crazy, students encounter a young Bushman from the Kalahari Desert of southern Africa who is totally perplexed by a Coke bottle which he discovers on the desert floor. Removed from the context of modern civilization, this strange "artifact" loses its original purpose and meaning and becomes a puzzling "gift from the gods." Who can forget the character of McMurphy, played so convincingly by Jack Nicholson, in the Academy Award-winning film One Flew Over the Cuckoo's Nest? Scenes from this movie powerfully illustrate the "resocialization" of a patient in the "total institution" of a mental hospital. McMurphy's struggle against the hospital staff leads us to debate the moral and ethical dilemmas of reconstructing an individual's personality against his will.

Used skillfully, appropriately, and selectively, this technique provides the instructor with unlimited opportunities to bring the social sciences to life in the minds of students. The ultimate reward comes when students begin to share fresh new examples of sociological concepts from the world of the cinema. It is then that the instructor knows that students are beginning to see their old familiar world through the lens of the sociological perspective.

Jonathan C. Brown, Instructor, Sociology

For further information, contact the author at Greenville Technical College, P.O. Box 5616, Greenville, SC 29606-5616.
Implementing a Point-of-Leaving Survey

The increasing amount of research on college students in recent years is an indication of the importance many educational institutions are now placing on social research. For many administrators, student input has become an important ingredient in formulating and implementing institutional policies.

Surveys on college students are conducted for a number of reasons: to monitor student concerns, to assess and change institutional policies, to evaluate program effectiveness, to assess students' perceptions of their training, and to monitor quality assurance in academic training. Since job placement of graduates is an overriding concern of all vocational/technical programs and is one indicator often employed to evaluate program effectiveness, an annual job placement survey of former students has become a modus operandi for many colleges.

In recognition of the salient role of student follow-up surveys in the academic environment, any systematic effort to evaluate the quality and success of vocational/technical programs must look beyond student follow-up surveys. A point-of-leaving (POL) survey can be valuable in evaluating the effectiveness of a vocational program from the student's point of view.

Alberta Vocational College, Lac La Biche

Alberta Vocational College (AVC), Lac La Biche, is located in rural northeastern Alberta. The college is one of four provincially administered vocational colleges operating under the Alberta Department of Advanced Education. The college provides educational opportunities for adult Albertans, particularly the "disadvantaged" (i.e., the unemployed and the educationally, economically, or socially disadvantaged). The mandate of the institution includes the provision of "educational opportunities for adult learners (people who need a second chance) to improve their academic qualifications, to develop skills suitable for employment, and to enhance those skills necessary for successful living."

To fulfill this mandate, Alberta Vocational College in Lac La Biche offers a broad spectrum of academic and skill-oriented training programs which are reflected in its four divisions: Adult Basic Education/Academic Upgrading, Human Services/Business Careers, Trades/Technical, and Community Programs and Services. AVC provides support services to its students in the form of counseling, family support and housing, financial support, and recreation/leisure programs.

Point-of-Leaving Survey

A point-of-leaving survey, as the name suggests, is an annual in-class survey of all prospective graduates of the Alberta Vocational College. The survey is administered by the office of Planning, Research & Development in the last week of class. The purpose of the survey is to gather empirically based data for administrators to use in counseling prospective graduates and in guiding potential students who are considering a program. Specifically, the survey solicits students' perceptions of their training program, employment prospects, and future educational plans.

The Instrument

The POL survey utilizes a generic questionnaire jointly developed by the four Alberta Vocational Colleges and designed to capture the following information from prospective graduates: (a) opinions regarding their experience while attending AVC; (b) employment prospects; (c) future educational plans; and (d) general comments about the college—such as, changes they would like to see at AVC or what they would tell current or future students about AVC.

The instrument contains a total of four sections: Section One provides demographic information such as age, address, gender, and number of dependents. Section Two measures respondents' perceptions of their training program using a Likert Scale (i.e., "strongly agree" to "strongly disagree"). There are as many as 12 statements to which students must respond about their program: (a) "I believe my program at AVC prepared me well for entry into my career," (b) "My program prepared me for other things besides a job," (c) "I believe AVC prepared me for future advancement in my career," and (d) "I would recommend AVC to a friend." Student perceptions of teacher effectiveness are included in this section, as well.
Section Three solicits information about respondents' plans after leaving college, especially whether respondents now have a job where they will continue to work, have been offered a job, or will look for a job later. Respondents are also asked if they expect to use their training on the job, the type of job they anticipate looking for, their expected starting pay, and if they plan to continue their training at any time in the future. Section Four is designed to gather general comments from students on various aspects of college life.

Significance of POL Survey

A point-of-leaving survey can be extremely valuable to educational institutions in terms of assessing the quality of a vocational program from the perspective of its graduates. As well, results of POL surveys benefit the students before graduation. The POL survey enables administrators to understand the perceptions and the problems of students before they graduate. Since the overwhelming majority of AVC students were unemployed at the time of admission, the results of a POL survey may serve as a basis for the development of job-hunting skills or job counseling for graduating students. Students in vocational programs are overwhelmingly oriented to workforce entry; the survey offers timely insight into problems that prospective graduates envisage in their transition from school to work, particularly those who had been unemployed for many years. A POL survey can be used to assess the perceived information needs of job hunters. A POL survey can assess how well students are prepared to meet the very real challenges of the employment marketplace. A POL provides one of the best means of collecting reliable, representative, and cost-effective, empirically based data on students. It is a valid means of assessing opinions among a representative group of students. A POL survey is a means of assessing quality assurance in vocational education. It depicts the image the graduate of a vocational program takes with them to the labor market. A POL permits a comparative analysis of graduates' perceptions of their vocational training before and after graduation. Comments from graduates on various aspects of college life are useful in guiding administrators in meeting the needs of new students. A POL survey reveals future educational plans of graduating students, particularly those in academic upgrading. Those who intend to further their education can be recruited into AVC career programs.

Alberta Vocational College, Lac La Biche, has found that the best approach is to conduct a triangulation of student surveys annually, including student point-of-entry, point-of-leaving, and follow-up.

Bob Adebayo, Research Coordinator, Planning, Research & Development

For further information, contact the author at Alberta Vocational College, Lac La Biche, P.O. Box 417, Lac La Biche, AB. T0A 2C0, CANADA.
Student Evaluations: Tools for Instructor Learning

Student evaluations of instructors and courses, long performed on an informal basis at college and university campuses across the nation, can be a positive tool for assessing instructor performance. At the Wolfson Campus of Miami-Dade Community College, we have implemented a systematic method of evaluation, in conjunction with the overall goal of the college-wide Teaching/Learning project, to make teaching and learning the most productive process it can be. Last fall our campus once again administered the evaluation instrument, encompassing a sample of 545 sections offered by 394 instructors.

Since we have begun collecting data and providing feedback to the faculty, there has been an increase in the positive ratings that students give their instructors. For example, between 1988 and 1990, the approval rating of students for the item "Instructor motivates student interest" improved from 87.5% to 89.1%; "Instructor encourages questions/participation" rose from 93.0% to 94.1%. These kinds of evaluations, when performed on a consistent basis, provide instructors with firsthand knowledge of how their students perceive their teaching and the course, enabling them to concentrate on areas which may need improvement.

It should be noted that the results are regarded by the campus as perceptions by the students rather than as absolute judgments. Negative student response to an item does not necessarily mean that the teaching method or course needs extensive change, but it usually signifies that the instructor needs to devote time to assessing his/her performance in this area. In some instances, better communication with students is all that is required to increase their understanding and appreciation of the teaching goals and methodology.

The evaluation addresses instructor preparation, as well as general course content. We are particularly interested in improving the responses to questions about required writing in all courses. Since we are strongly urging all faculty to include writing assignments in their courses, we have instituted the use of collateral readers to mark writing assignments for deviations from edited American English. The assignments are then returned to the faculty member, who grades the content. As the use of the collateral readers becomes more familiar to instructors, we hope to see all courses include writing assignments.

A detailed breakdown of the evaluation results over the past three years at the Wolfson Campus is included on page 2. While there is overall improvement in instructor and course rankings, some items have shown no improvement and some have declined. We believe that these are exceptions which can be expected; however, we plan in the future to conduct statistical analyses to identify those which items may be of statistical significance in further analyzing the results.

Eduardo J. Padron, President, Wolfson Campus

For further information, contact the author at Miami-Dade Community College, Wolfson Campus, 300 N.E. 2nd Avenue, Miami, FL 33132-2297.
<table>
<thead>
<tr>
<th>EVALUATION ITEM</th>
<th>1988 Agreed</th>
<th>1989 Agreed</th>
<th>1990 Agreed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Instructor made course objectives clear to all.</td>
<td>91.7%</td>
<td>93.3%</td>
<td>92.2%</td>
</tr>
<tr>
<td>2. Instructor made grading system clear to all.</td>
<td>91.8%</td>
<td>93.2%</td>
<td>93.6%</td>
</tr>
<tr>
<td>3. Exams covered material and assignments.</td>
<td>92.1%</td>
<td>93.5%</td>
<td>93.1%</td>
</tr>
<tr>
<td>4. Exams, etc., were graded fairly.</td>
<td>90.7%</td>
<td>92.2%</td>
<td>92.6%</td>
</tr>
<tr>
<td>5. Instructor encourages questions/participation.</td>
<td>93.0%</td>
<td>93.6%</td>
<td>94.1%</td>
</tr>
<tr>
<td>6. Instructor shows thorough knowledge.</td>
<td>95.5%</td>
<td>95.9%</td>
<td>95.2%</td>
</tr>
<tr>
<td>7. Instructor was concerned with student progress.</td>
<td>88.7%</td>
<td>91.3%</td>
<td>90.3%</td>
</tr>
<tr>
<td>8. Instructor motivates student interest.</td>
<td>87.5%</td>
<td>89.1%</td>
<td>89.1%</td>
</tr>
<tr>
<td>9. Instructor was available for help and advice.</td>
<td>91.3%</td>
<td>91.1%</td>
<td>91.3%</td>
</tr>
<tr>
<td>10. Instructor was well prepared for class.</td>
<td>94.3%</td>
<td>95.2%</td>
<td>95.2%</td>
</tr>
<tr>
<td>11. Instructor starts class on time.</td>
<td>93.0%</td>
<td>94.6%</td>
<td>95.7%</td>
</tr>
<tr>
<td>12. Instructor dismisses class on time.</td>
<td>93.4%</td>
<td>93.5%</td>
<td>94.0%</td>
</tr>
<tr>
<td>13. Instructor presents material clearly.</td>
<td>90.4%</td>
<td>92.4%</td>
<td>92.0%</td>
</tr>
<tr>
<td>14. Instructor's teaching ability is very good.</td>
<td>91.6%</td>
<td>93.0%</td>
<td>92.1%</td>
</tr>
<tr>
<td>15. Would take another class with instructor.</td>
<td>85.9%</td>
<td>87.5%</td>
<td>87.0%</td>
</tr>
<tr>
<td>16. Objectives agree with what is taught.</td>
<td>93.1%</td>
<td>94.7%</td>
<td>94.7%</td>
</tr>
<tr>
<td>17. Course material is sufficient for objectives.</td>
<td>91.1%</td>
<td>92.5%</td>
<td>92.5%</td>
</tr>
<tr>
<td>18. Assignments help in understanding the material</td>
<td>89.9%</td>
<td>92.0%</td>
<td>92.2%</td>
</tr>
<tr>
<td>19. Textbook covers course material well.</td>
<td>82.1%</td>
<td>85.3%</td>
<td>85.7%</td>
</tr>
<tr>
<td>20. Writing assignments required in course.</td>
<td>74.5%</td>
<td>76.3%</td>
<td>78.3%</td>
</tr>
<tr>
<td>21. Required writing important to understanding.</td>
<td>75.0%</td>
<td>77.2%</td>
<td>78.1%</td>
</tr>
</tbody>
</table>

**EARLY INSTRUCTOR EVALUATION AVERAGE**
91.7% 92.6% 92.6%

**YEARLY COURSE EVALUATION AVERAGE**
82.5% 84.7% 85.4%
From Textbook to Community

Throughout my teaching career, I have sought to learn from some of the pros in my field. I have grown familiar with their buzz words, e.g., giving, respect, relationships, responsibility, process, growth, and change. I have observed their behaviors. Among the pros was a high school senior class advisor who encouraged students to buy something for the school or the community with funds remaining in their account after all graduation expenses were paid. This exercise bore its own message: Education must move from the textbook to the community when possible. It is a giving process, it is a lesson in reciprocity...it is accountability.

Another was an educational administrator who believed that while the three Rs—reading, writing, and arithmetic—were critical to the process of education, so were three others—respect, relationship, and responsibility. He promoted mutual respect among students and faculty alike, he trusted that this respect would carry over into other relationships, and he sought to instill a sense of responsibility in and among his students. Results? Perhaps one less criminal and one more potentially productive member of society.

I have chosen not merely to acknowledge these experiences but to incorporate them into my own teaching. Therefore, I have evaluated my courses and decided to make an unprecedented change: Community service is now a requirement in each humanities and social science course.

My primary goal is to get students involved with the community, to recognize and accept that they share some responsibility for its welfare. Specifically, the community service requirement is a six-hour commitment to visit and observe activities in community organizations. The first three hours must be spent in three different organizations. The final three hours must be spent in one of these three organizations and must be completed in a single block of time. This block-of-time requirement serves a dual purpose: it ensures commitment to one of the organizations, and it provides a potentially valuable contact for employment after graduation.

Two data retrieval forms assist students in chronicling their experiences. The first contains preliminary data which must be submitted to me for pre-approval one week prior to any visit. This allows time for me to call the sites, help students establish contacts in the event that problems arise, and verify attendance through random checks. Students must provide the following information:

- Date
- Time
- Name of student
- Course reference
- Name, address, and telephone of organization
- Contact, Title
- Supervisor's comments (optional)
- Supervisor's signature, Date

Upon their return from each community service activity, students detail their experiences by answering the following questions:

1. Why did you choose this particular organization?
2. What were your expectations when you began the community service activity?
3. Were there any special incidents that occurred during this time?
4. What was your reaction to this experience?
5. What particular traits, skills, and/or qualities did you bring to this service?
6. How could you improve this experience?
7. How did you grow as a result of this experience?
8. By what date do you expect to complete your note of thanks?

Students' responses to questions #4 and #7 are critical—responses indicate what they are learning about themselves and the world in which they live. Moreover and even as important, they learn that education does not always come from a textbook.

Denise S. St. Cyr, Professor, Humanities & Social Sciences

For further information, contact the author at New Hampshire Technical College—Manchester, 1066 Front Street, Manchester, NH 03102.
Participative Evaluation

Gradually, I have been converted to believer in cooperative teaching and learning strategies. After years of lecturing, I have come to understand that students can learn from each other almost as well as they can learn from the thoroughly thought-out, meticulously prepared, and brilliantly delivered lecture. Amazingly, students sometimes learn from other students better than from discerning and sharp-witted lecturers. Moreover, sometimes they can improve on the lecturer's finely tuned examples, often providing examples that are more meaningful (and perhaps more interesting).

Just as student interaction can promote and enhance learning, teacher-student interaction can promote and enhance teaching. However, teacher-student evaluation, or participatory evaluation, needs to be carefully structured to offset real or perceived status differences between teacher and students (or at least the "power" that the giving of grades bestows on the teacher). The following evaluation strategy has proven to be useful.

Shortly after mid-term, I devote one class day to evaluation. I explain that (1) I value student opinions about the course, my teaching, and their learning, and (2) I wish to gather opinions now because I believe end-of-the-quarter evaluations occur too late to serve the students providing them.

I write three or four questions on the board. Most often, the first question addresses some specific aspect of the course. Often this question deals with the students' reaction regarding some change in pedagogy I have tried—for example, a new testing technique or type of assignment. The other questions probe for information about changes the students would recommend and about techniques they found useful.

In order to ensure concrete and utilitarian feedback, all questions require at least a three-item response. For example, “List three things I could do to help you understand and learn the material.” Because I am looking for concrete "how-to" ideas, students are to include suggestions for implementing proposed changes.

Students are divided into teams (three to five members). I attempt to put students together who may not be familiar with each other, hoping that they might recognize in this new relationship that learners have different learning styles and different expectations of the teacher, that teaching often involves balancing the needs of all individuals.

Each group discusses the three evaluation items and agrees on a group response. One member of each group is selected to record the responses in writing. [Typically, students are to assign this responsibility to the youngest group member. The process of identifying the youngest member serves as a nice ice-breaker.] I leave the room for 20 minutes; students discuss the three evaluation items, record their responses without identifying themselves, and place the written answers on my desk.

Thus far, the process involves students only. When I return to the classroom, teacher-student participation begins. I take one question at a time and read each group's responses aloud. All of the students are invited to participate as I probe for additional information to clarify responses, inquire about alternatives for implementing suggestions, and discuss the suggestions that all agree should be implemented. Finally, I identify the suggestions that I can incorporate into instruction and reject, with explanation, those I cannot.

This technique provides an opportunity for students to discuss learning likes and dislikes, first with one another and then with the instructor. The participatory nature of the exercise requires the students and the professor to acknowledge and celebrate the uniqueness of individual learners.

John F. Murray, Professor, Philosophy and Coordinator, Arts & Sciences

For further information, contact the author at Clark State Community College, P.O. Box 570, Springfield, OH 45501.
ALC: Activating Learning in the Classroom

The faculty participants say: “The ALC Program is a time to reflect—a hardworking sabbatical.” “I know it is a little corny, but I feel as if my teaching is being celebrated.” The students participating in the Activating Learning in the Classroom classes say: “The Course Guide asked us to supply our own input and feelings—I loved it! If every class had something like this, I think I would like school better.” “It's been a while since I had fun in the classroom. I need that kind of attention to do well. Thanks for letting me be myself, not my student number.” What in this program produces such positive reviews from both faculty and students?

The ALC Program considers the crucial elements present in any classroom learning environment and then focuses on the three variables of the classroom equation: instructors × information × students (to be read in either direction). The instructor's task is to facilitate learning, and the students' task is to learn. But how? There is a process to teaching as there is a process to learning. In order to activate these processes, ALC offers an instructor the opportunity to stand back from a course and consider each of its ingredients. Instructors analyze their own styles of teaching, the thinking of their students, and the materials in their course. They clarify their goals for the course, then ponder the most effective ways to motivate a varied group of students to embrace them.

Once these questions have been considered, the instructors begin the challenge of translating their ideas about the classroom component into a Course Guide. Thus, the Guide, which is developed for each ALC course, reflects the individuality of the instructor and connects the students to the experience of learning. It serves as a concrete avenue for faculty members to try out new approaches to presenting material, and it provides a way for students to experience supportive and personal comments from the instructor as they work through the course material.

Pretend that you are a student arriving on the first day for your humanities course. You settle into your chair and open up the large Course Guide that the professor has just handed to you. On the first page, you see the following information:

The Course Guide (this huge notebook sitting in front of you right now) will help guide you through the course material. It contains:
- a calendar for the semester;
- maps—for identifying the areas about which we will be studying;
- journal entry questions (more details on these later on);
- previewing exercise—to introduce you to the texts you will be reading for this course and give you a preview (before you begin reading) of useful background material and relevant information outside the actual “body” of the text;
- reading Guide question—to help you focus on and respond to the material you will be reading in preparation for class;
- occasional pithy, personal, wise, and whimsical comments from me; and
- other oddments and errata.

You will find that you are asked to write a lot—perhaps more than you've been used to in other courses—on your thoughts about topics to be discussed in class, answers to specific questions, questions you want answered.

But it's your interaction with the “stuff” of this course that will make it more worthwhile—for you and for the rest of us.

Now, on to some of the requirements and expectations.

What do you think? You probably have a sense that this professor is well prepared, but you also get a feeling that you will be an active participant in the
course. The instructor’s sense of humor comes through in this brief introduction, and you may feel a personal connection to the teacher standing in front of you.

The ALC Program is designed with an appreciation for the individual teaching style of each faculty member. Research and practice have provided educators with evidence of indicators and characteristics of effective teaching; but individual teachers translate what they know about good teaching into their own course content, their own style, and their own classrooms of students.

The ALC Program attempts to help instructors with this translation by bringing together a supportive group of peers to discuss ideas for the classroom and materials for the Course Guide. Faculty members in the ALC Program come from different disciplines at the college, and the sharing of perspectives among the faculty members provides insight into how a similar problem is solved across disciplines. Through lively discussion and group projects, faculty members begin to consider new possibilities for engaging students in the course content and for understanding the process of learning from a student’s point of view.

Offered as a yearlong instructional development program, ALC began with eight instructors from each of the divisions of the college and has now, as a result of their request, added a ninth member from administration and staff. The ALC nine meet in seminars with the two Faculty Coordinators to redevelop courses that they plan to teach within a year’s time.

The ALC seminar begins at the close of the spring semester with a four-day session introducing and discussing the classroom equation, continues through the summer with the preparation of Course Guide materials, and resumes with the weekly seminars in the fall. The fall seminars cover many areas of the classroom experience. They provide a lively forum for discussing teaching styles, learning styles, and critical thinking skills; the rhythms of the semester and the use of space within the classroom; the incorporation of writing, collaborative learning, and interdisciplinary and global issues; as well as time for sharing and group critiquing of work in progress. By December, the Course Guide is completed. The seminar reconvenes for occasional meetings during the spring semester as each instructor pilots the Course Guide and the multitudinous ideas that have evolved throughout the fall.

Donna K. Duffy, Associate Professor, Psychology
Janet W. Jones, Associate Professor, Humanities

For further information, contact the authors at Middlesex Community College, Springs Road, Bedford, MA 01730.
Dear Aggie: Letters to a Teacher

Each of my students begins the semester with a “letter to the teacher” assignment, and I begin each semester by reading the students' letters.

Write a letter to me, Aggie, your instructor, telling me who you are. Tell me of your strengths, weaknesses, fears, and goals. Discuss your worlds and how your roles in these worlds might affect your performance in this class. Speak of your mathematics background. Discuss how mathematics might play a role in your future.

Tell me what I can do to help you achieve your goals for this class.

Include a statement indicating that you have read and understood the Grading and Cheating Policy.

Before employing this letter-writing strategy to begin each class, I got to know my students more gradually via a seating chart; in-class discussions and questions; and tests, quizzes, and “questionbook” responses (responses are to questions that focus on major points in course content and topics or ideas with which students often have problems). Sometimes after a hard test, I've asked: How'd you do? What do you feel good about? What was your weakest area? What made the good area good and the weaker area weaker: what made the difference? What was the hardest part about taking the test? What could have made your grade better?

Sometimes I have used the words of others to inspire student responses. The following assignment is an example.

Write a short position paper or essay about the message one of these quotes has for you:

Genius is one percent inspiration and ninety-nine percent perspiration.
—Thomas Alva Edison

All things are difficult before they are easy.
—John Norley

I. Read the following letter (also the Grading and Cheating Policy statement).

Dear Student,

Teaching mathematics to people is my vocation. Both mathematics and my students are important to me. I work hard at teaching and expect my students to work hard at learning. I am a parent, a full-time teacher, a landlord, an author, a publisher, and an educational consultant.

My office phone number is (# inserted) and home number is (# inserted). (Please use these numbers if you wish to reach me or if you are stuck on the homework.)

It is your responsibility to learn the material. It is my responsibility to make the learning process as productive as possible. If you miss a class, check the course outline to determine what work you must do, read the material in the text, do the homework, and phone if you need help.

Tests are like job interviews scheduled months in advance: Treat them as such. Don’t miss a test. If you must miss a test, be sure I know about it as soon as you do.

Being a student is not an easy job. It is work. Plan time to attend class, as well as time to work on the material outside of class. If I can be of help, call me or see me in my office or just after class.

Have a good semester.

II. Now, write a letter to me, Aggie, your instructor....

Meeting students through their initial letters and maintaining a one-to-one relationship through additional letters and personal contact really does work! Getting to know the students through letter-writing increases the speed with which
individuals become individuals and not just members of the “10 o’clock precalc class.”

Agnes Azzolino, Assistant Professor, Mathematics

For further information, contact the author at Middlesex County College, 155 Mill Road, P.O. Box 3050, Edison, NJ 08818-3050.

Postcards for Student Success

Aware of the high correlation between class attendance and academic success, Vincennes University implemented a project designed to improve class attendance. The challenge was to develop a system for notifying students early when class absences began to undermine the likelihood of a passing grade. The criteria were that the system must be effective, immediate, inexpensive, and not labor intensive.

Using the automation capabilities of the mainframe computer, VU designed a “blue card” which students were asked to sign during the first day of class. The card verified a local address, and the student’s signature allowed the release of academic information. Instructors would begin classes by discussing the importance of attendance and explaining that the “tear-off” portions of the blue cards would be used to notify students that the instructor was concerned about their absences.

When students began to miss class, the instructor would tear off the first part of a computer-generated ticket. A 10 keystroke input would generate two postcards, one to the student’s local address and one to his permanent address; the cards would indicate concern over non-attendance. Further absences would generate a second, more strongly worded postcard. A third tear-off would generate a letter to the student that he/she had been dropped for non-attendance and had received a grade of W or WF. A copy of this letter would be sent to the Records Office for the permanent file.

Pilot Test and Results

The system was tested during fall semester 1989. All reading, English, and mathematics developmental courses, English composition, and two large occupational programs (Broadcasting and Law Enforcement) took part in the pilot study.

A total of 563 first-notification cards were sent, representing 605 classes. Just under 150 second-notifications were mailed, and 110 students were dropped from class for non-attendance. The Dean of Students (whose name appeared on the card) received numerous calls from parents, thanking him for the notification and asking how to contact the instructor. The president also received numerous positive calls and letters.

Academic advisors expressed their gratitude. The system periodically generated for them a list of their majors who had received attendance notification, frequently from courses outside the major field of study—the first time this information had been available.

Overall, a 2-3% reduction in D/F/WF grades was realized. The effect was most pronounced in basic developmental mathematics classes—a 17% decrease in D/F/WF grades and a 14% increase in A/B/C grades. The results were significant among classes scheduled at 8:00 a.m. or in the evening—a 4% increase in A/B/C grades. For the 8:00 a.m. and evening basic developmental math classes there was a gain of 33% in the success rate and concurrent decrease of 33% in D/F/WF grades.

Program Cost

Approximately $500 was spent on this project. Programming was a one-time internal staff effort; design and printing of the “blue card” and postcards totalled $185; the remainder of the cost was postage.

Faculty, for the most part, welcomed the project. Word of the project spread fast on campus, and many asked when they could become part of the project. “Project Bluecard” has been fully implemented with over 6,000+ full- and part-time students on campus.

Further research will be conducted to determine if retention and graduation rates appear to be affected, as well as changes in the proportion of students, especially freshmen, who find themselves in academic difficulty.

Jeanne Budig, Research and Planning
Andrea Koenig, Management Information
Tim Weaver, Dean of Students

For further information, contact the authors at Vincennes University Junior College, Vincennes, IN 47501.
Developing Community: Taking THE COURSE

One of every three people in Charlotte wasn't here 15 years ago. They lack roots. As we begin to understand and appreciate each other's roots, community develops.

Developing a sense of community, encouraging an understanding and appreciation of a community's roots, was the goal of THE COURSE—an 11-week, home-study, newspaper, hands-on, project design, field trip, light readings, get-up-and-go-and-do, film study, map-making, involvement course for families in the Central Piedmont Community College (North Carolina) area.

Registration
With the local newspaper as co-sponsor, promotion was heavy. The college made a small profit although it kept registration fees low ($5), getting across the subtle message that community colleges are everyone's best bargain. Approximately 1400 families registered by phone or by the newspaper mail-in form. (One registration served for an entire family.)

Students who enrolled in THE COURSE lived in 13 different states including Arizona, California, Illinois, Maine, Mississippi, New York, Texas, Wisconsin, and Kentucky. They registered from five countries—U.S.A., Belgium, Sierra Leone, Uruguay, and Vietnam. Three students were over 90 years old.

Curriculum
THE COURSE text was printed in the Charlotte Sunday newspaper (circulation of approximately 320,000). The text covered 11 broad subjects: geology, religion, medicine, politics/law, business, education, women/minorities, arts, sports, preservation, and the future.

Eleven different authors were commissioned to write a single chapter each of this text, and the single theme was "Charlotte and how it got the way it is today." Each author approached the theme from his/her specialty area. Thus, a geographer began with the woolly mammoth 10,000 years ago and brought us to the present where the clay-like land and swift streams still shape how our region develops. A black minister and a white minister traced the coming of religion to Charlotte and the thread that connects "then" with "now"—for example, how can one region embrace Billy Graham, Jim Bakker, and Sweet Daddy Grace?

Each week after reading the newspaper article, students opened a home-study packet. The packets included objectives, related family projects, and suggested field trips. Some of the packets included old newspaper pages for the chapter's time in history. Many contained additional writings from early times, old photographs, do-it-yourself graphs, maps for the students to complete in various colors (to illustrate district gerrymandering or the spread of the city limits, for example), and eyewitness accounts.

Sample Projects and Field Trips
- "From Brown Mules to Orange Buses," the chapter on education, included the history of school integration and followed the first black child to an all-white school in Charlotte. Newspaper photographs showed the abuse she suffered. She retold her story from today's perspective.
- The author of the Sports chapter, titled "Gentlemen, Start Your Basketballs," dared list the top 25 names and the top 25 moments in Charlotte's sports history—and the debate still rages. The optional project for Sports was: Invent a game and send us the rules.
- The Arts chapter described "the night Caruso came to town." The headline read "Great Singer is Greeted at the Station by Large Crowds" and described how hundreds jammed his hotel just to see his signature on the register.
- The project for the chapter on medicine ("Babies, Boils, Breaks, and Blood") required the student to write a brief paper about the practice of medicine in the 40's in Charlotte. The sources for this paper were three retired doctors who allowed us to list their home phone numbers and invite students to call for interviews before 10:00 p.m. and calls limited to 20 minutes. The field trip for this chapter was to the college for a hands-on fair of modern medical instruments.
- The project for the chapter on preservation required the student to submit the headlines and lead paragraphs they might expect to see in the newspaper in the year 2005.
• Other field trips were to an old gold mine, to the Federal Reserve (where the handout for kids was a bag of shredded money), to the coliseum and the Grateful Dead’s dressing rooms, and for a self-directed walking tour of old downtown churches (some with separate slave balconies). Guides were waiting for THE COURSE students at most of these attractions.

Spin-Offs
• Each of THE COURSE authors appeared on CPCC’s cable talk show the night after his or her article was published. Viewers were invited to call in with questions or comments. Some shows received 15-20 calls, an extraordinarily large number for a college cable program.
• Audiotapes of the television programs were available to our radio station where we read for the visually impaired.
• The state of North Carolina awarded renewal units to those school teachers who completed any two of THE COURSE’s 11 projects. Students responded with elaborate, thoughtful projects, such as original lyrics and music about Charlotte’s beginning, histories written for a first-grade level, and paintings of early scenes.
• Schools have asked to buy copies of the television series for their libraries.
• The local school administration is considering the series as required study.

Evaluations
Hundreds of students wrote evaluations. Others simply wrote thank-you notes. We have been told stories of warm friendships that began during THE COURSE and of a young couple who met on a COURSE trip and became engaged. We have heard of communication between maids and housewives who had only talked around subjects for years.

THE COURSE takes little credit for these results. The potential for communication already existed within these groups; we only supplied the easy device, only “illuminated the latch string,” as one student wrote. It appears that THE COURSE started some people thinking in new areas, communicating at new levels, and seeing with new eyes.

Mike Myers, Community Relations

For further information, contact the author at Central Piedmont Community College, P.O. Box 35009, Charlotte, NC 28235.

A Real-life Grading System

In 1988, I devised a new grading system for Introduction to Business. With this grading system, students learn about real-life American business needs, conduct, and restraints while “earning” a grade.

Since the adoption of this program, poorly motivated students have become busy with stock market affairs and money management at Bunker Hill Community College. Attendance has increased, quiz and exam grades have improved, and overall interest has grown significantly.

How It Works
Each student in our course receives 44,000 fun dollars applied to his/her account. Incorrect test answers and sloppy work costs money; extra work, smart stock buying, and class participation help earn money. Each student receives an account summary every 30 days. The ending balance buys a grade. The recordkeeping, billing, and summary are simple, flexible, and computer-driven.

Rationale
Why run a business course as much like a business as possible? Students at BHCC have more experience spending money than making it; therefore, mastering the idea of saving by reducing or controlling spending is a difficult concept for them to grasp.

Frederick Herzberg, management consultant, professor, and creator of the Motivation Hygiene Theory, has always stressed “self-assessment” at regular intervals for subordinates. What could provide a better assessment than translating course performance into dollars and cents, turning out “invoices” every 30 days, and treating the entire experiment like 25 or 30 small businesses? Each individual student has control of his/her own destiny in a meaningful, believable, and tangible way.

Perhaps the course is less threatening because the invoices, the money idea, and the results seem more commonplace, making them easy to accept. The individual charges, cost centers, and income areas are variable. I have designed costs and charges to meet our own set of peculiarities and needs, but this grading system and the computer programs can be adapted to a wide variety of business courses.

Marshall Nanis, Professor, Business

For further information, contact the author at Bunker Hill Community College, New Rutherford Avenue, Boston MA 02129.
Inviting Nontraditional Students into the Science Culture

Nontraditional students can feel academically at-risk in their first college science courses. It is imperative that science teachers implement innovative approaches, create novel pedagogic techniques, employ extraordinary strategies, and, in general, discover an elixir to affirmatively embrace this population within the science culture. Some strategies (learned through trial and error) seem to work:

1. **Breaking the “isolation barrier” and forming a learning community.** The first class session begins with an informal introduction to the course, the instructor, and all the members of the class. After revealing my age, background, how I entered teaching, my most embarrassing moment (along with other anecdotes), students are invited to introduce themselves, tell why they enrolled in the class, describe the picture that comes to mind when they hear the course title, describe their current occupation, and explain their future goals. Along with these brief biographies, tension-reducing laughter is provoked by asking them to identify their favorite animal, or least-liked food, or preferred color, etc. Those who are continuing students are asked to mentor neophytes to the college. Students are urged to exchange phone numbers and to form cooperative study groups.

2. **Perception of the world and construction of meaning.** The second week involves examining perceptions and how we construct the world from sensory information and prior experience. I offer some optical illusions, and the students are directed to draw their own illusions and explain what they sense from these images. Incomplete and ambiguous figures, gestalt representations, after-images, moving illusions, and discrepant events are examined to show how perception is influenced by senses, associations within the brain, preconceptions, expectations, and cultural influences. There are no “right” answers for any of these activities. Students, working in groups, learn that while we each may view the same thing or idea, we may perceive and react to stimuli differently. There is no absolute way to evaluate information, not unless we agree on arbitrary standards to measure and evaluate qualities.

3. **Students as participants to clarify conception and reception.** Course objectives are followed in lectures and illustrated by laboratory activities. However, students are encouraged to participate in question and discussion activities during lecture. It is essential that these students verbalize and gain a proficiency with the language that they have difficulty in pronouncing and graphically writing. During the lecture portion, the students are invited to recapitulate, in their own words, how they interpret the content. With the right atmosphere, such activity initiates student interaction in verbalizing the material, and it permits examination of preconceptions, or naive assumptions, which can be examined. One student courageously, but frustratingly, asked after extensive review of Darwin’s work and the generalizations derived from his observations that led to key points in the evolutionary theory, “Well, I understand all that, but what do these words natural selection mean?” The words encapsulating the concept did not connect the idea for this student, and so we were able to dissect the meaning of the words and to tie together the concept with the triggering title.

4. **Liberating science from classroom confines.** Many students have never been to a public science facility. As part of the course requirement, students are to visit a science center, museum, laboratory, research center, marine world, arboretum, zoological garden, or aquarium. The choices are almost endless. In addition, they are to write a short report describing the purpose of the center and their impressions. This has been a revelatory experience to many students. Little did they believe that they would enjoy these outreach activities identified with science.

5. **Newspapers and other media as part of the text.** News diaries, in which each student collates three science news items weekly for 10 weeks, are required. Each student summarizes in one page the three news articles that made the greatest impression. Scientifically literate students are expected to comprehend and comment on science news stories. Using TV schedules, students select to watch either one-hour or two half-hours of a current science program. Two-
page reports detailing the content and elaborating on the familiar and the unfamiliar, along with any other remarks commenting on the delivery of the material, are encouraged. These efforts are not graded, but the assignments are course requirements and cost a letter grade if the assignment is unfulfilled.

6. **Outside (non-text) science reading.** As part of the course readings, short essays or chapter selections from natural science collections are assigned to acquaint students with science writing. James Thurber's "University Days" fits in well with the microscope lab. Isolated chapters from Roehe's medical mystery series, "The Beetle of Aphrodite," Lorenz' "King Solomon's Ring," Quammen's "Natural Acts" column in *Outside* magazine, and Walt Whitman's poems extend science to other worlds.

7. **Science as part of the community resources.** To show abstract science in operation, classes have been given tours through local farms, seed research facilities, aquaculture laboratories, a university medical school, zoological gardens, exercise physiology centers, food technology plants, and medical laboratories. In addition, speakers from city services have given class presentations on chemicals in the environment, pollution hazards, and firefighting techniques.

8. **Students actively involved in their own laboratory set-up and design.** Students need concrete hands-on experiences to make this esoteric subject real. To show that the materials are not mysterious potions or exotic substances, students are encouraged to weigh out and make up the laboratory solutions and to bring in the examined materials. Common everyday materials found in the home are preferred. For osmosis demonstrations, the students make sauerkraut and bring in naked eggs that have been deshelled in vinegar. Red cabbage solution or beet water made at home are used as indicators for pH changes. Students observe the effervescence created by the enzyme breakdown of hydrogen peroxide when it is mixed with liver, yeast, or blood; but they do not have the faith to accept that this gas is oxygen. Empower them to thrust glowing splints into the foam and watch them ignite.

These are exercises which they take home and repeat for themselves or perform for their families. Since students know so little about living materials, they must collect their own snail, dig up plants to find root nodules, visit fields to bring back evidence of living things to examine under the dissecting microscopes, search for owl pellets, visit preserves with identified plants and animals. Students have brought in animal blood from veterinarians, insect and plant oddities, medical records, exotic pets, ostrich, emu, and hummingbird eggs, to name a few.

9. **Seminar approach for interactive discussions.** A relaxed round-table approach is used usually during the laboratory periods immediately before a holiday to relate findings from the news reports, readings, media programs reviewed, and science centers visited. These report sessions are viewed somewhat apprehensively at first, but they soon become intimate and vociferous family discussions.

10. **Marketers of science learning.** The best way to learn is to teach—so students are involved as docents in science open-houses to the community. Participants are invited and provided with materials to demonstrate a science activity to their children's or sibling's grade school classes. These include polymer formation in slime preparation, using household substances to illustrate chemical reactions, and playing with illusions. Non-major chemistry students put on a chemical Christmas show using demonstrations that they have found in library books (I suggest hunting through the children's section).

11. **No-fault learning: Ungraded writing and reports.** Students have been conditioned by grades to produce the expected or to behave in an accepted manner. Eliminate grades for reports but comment generously in constructive ways to encourage them to explore different ways of thinking and generating information and ideas. While these ungraded assignments receive no letter reward, such assignments do serve as stimuli to encourage the science-leery and grade-conscious student to dare try other ways of thinking and of exploring different modes of expression. Students need the security of being able to gracefully stumble in order to refine their performance.

Instructors must combine expertise with sensitivity, be flexible in meeting changing needs, have unbounded enthusiasm to infect students, yet hold attainable expectations. We must loosen barriers and invite more initiates into the culture of science. It enriches all of us. As science educators, this is both our mission and our role!

**Rita A. Hoots, Instructor, Biology, Anatomy, Chemistry**

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