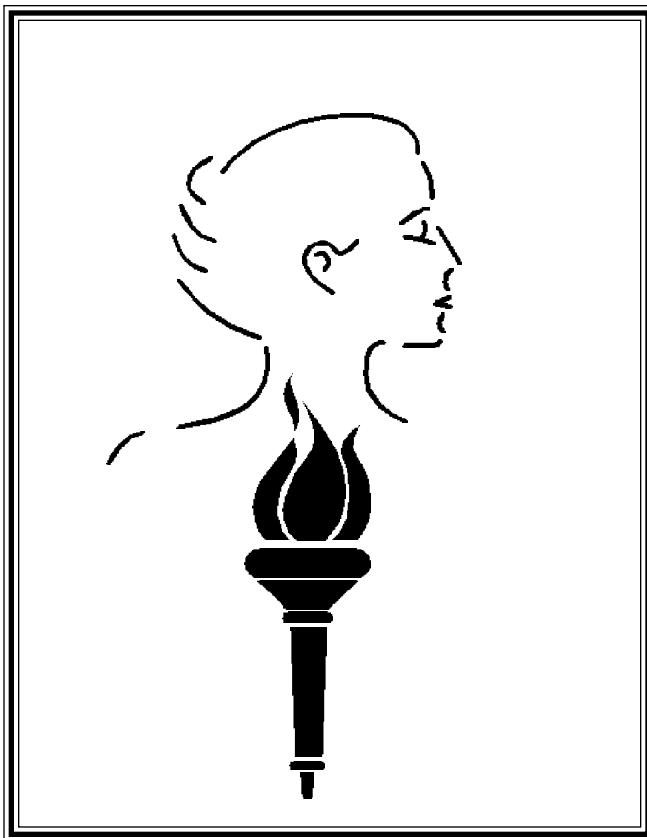
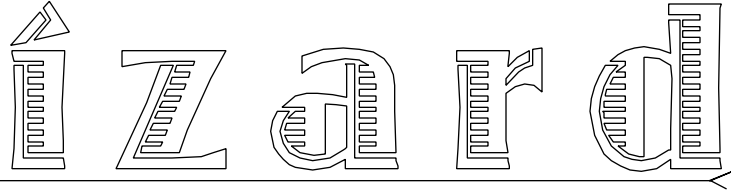


the

Spring 1996  
Issue number 35



## Motivating Your Students:

### *Lighting the Fires of Their Personal and Intellectual Development*

by Jeanette Norden  
*The Class Act Newsletter, Vanderbilt University*

My teaching is strongly influenced and guided by a set of values which reflect my own philosophical outlook. I believe that the foremost goal of teaching medical

students should be to promote their development and growth on both intellectual and personal levels.

My teaching ideas have evolved over the 10 years I have been director of the Medical Neuroscience's core course for medical students. The emphasis of this course is on didactic knowledge. A primary goal is to expose students, through lecture and lab, to the anatomy, chemistry, and physiology of the nervous system. Most students have had no prior exposure to the material and this is the only formal exposure to neurobiology they have in medical school. The Medical Neurosciences course is truly a core course, and I feel an obligation to assure that each student acquires a fundamental understanding of how the human brain is organized. Although it is the student who must ultimately learn the material, I am convinced that the manner in which this factual knowledge base is transmitted can greatly facilitate this process. I believe it is most important to stimulate the student's curiosity and desire to learn by transmitting not just facts about structures in the brain and how they are connected, but a wonder for how these systems bring about complex human behavior. All of these goals are accomplished by the presentation of complex material in a straightforward and readily understood manner, by an integration of material throughout the course, and by my own genuine enthusiasm for the subject.

Transmission of a factual knowledge base in clear and concise terms even with enthusiasm, however, does not guarantee that future physicians will be able to diagnose disorders of the nervous system, which often manifest themselves in obscure and perplexing ways.

Unfortunately, the goal of most basic science courses is to disseminate facts and examine students without consideration for whether these facts are relevant to the practice of medicine. This encourages an emphasis on exam taking, rather than fostering a genuine interest in or understanding of the material. Thus in the Medical Neurosciences course, I place a heavy emphasis on teaching students the relevance of the facts they are

expected to learn and on the promotion of clinical reasoning skills. Whenever possible, didactic lectures are followed by clinical correlations where the facts are reviewed in clinical contexts. While it is only good pedagogy to teach medical students the relevancy of the thousands of facts they are asked to memorize, traditionally there has been strong opposition to the inclusion of clinical material in basic science courses. However, showing respect for their future roles as physicians by teaching the relevancy of the didactic material encourages the students to actually learn, rather than just memorize.

One of the most important ways that I try to encourage the intellectual growth of students is by promoting the acquisition of reasoning skills. Students appreciate that they must acquire knowledge in order to reason through complex clinical cases where they are presented with a constellation of findings in a unique context. Clinical reasoning, however, is not just about collecting data or knowing facts. It is about the ongoing formulation of clinical hypotheses. A physician who is limited in such higher order reasoning skills will fail to see all of the possibilities inherent, for example, when a patient says, "I have a headache". The development of clinical reasoning skills is one of the most important aspects of the intellectual training of medical students. For example, I might present a patient case and ask students to tell me what the two most likely hypotheses are about the underlying central nervous system involvement. I might then require them to think about how they might go about eliminating one of these hypotheses, or what additional information they would need for confirmation. Or I might give them additional information and ask them in what ways this new information causes them to modify their original hypotheses. Such exercises challenge the student to synthesize material into a conceptual framework.

It has become increasingly obvious to me, however, that the above goals alone, even if they include the development of clinical reasoning skills, are too narrow. These goals focus only on promoting the intellectual or cognitive development of the student. Diagnosis, which requires that the physician be knowledgeable and competent in clinical reasoning, is only a part of the art and practice of medicine. The *manner* in which doctors treat their patients and their patient's loved ones on personal levels can contribute enormously to the healing

process and to life, even in the face of impending death. That this aspect of medical education is overlooked is reflected in the growing dissatisfaction many individuals in our society have with their physicians. The perception appears to be that during medical school, students become progressively dehumanized, and patients are increasingly depersonalized until they are regarded as manifestations of a particular disease process rather than as people. Just as they require intellectual growth, students need to have their natural compassion nurtured. To promote this growth, there is a component of the course called "Personal Hours" in which discussions of issues such as empathy, loss, grieving, and death are given in the context of neurological disease. Students are encouraged to see themselves as individuals who will undergo loss, be in need of social support themselves, and thus feel a link with their patients. They are asked to actively listen to patients on a personal level. One of the ways the latter is stimulated is by inviting individuals to talk to the students about how their lives have been affected by neurological disease. These personal discussions focus on the patient as a person with whom the physician establishes a relationship of trust and respect. The idea of introducing such discussions into a basic science course was met initially with great skepticism and even opposition by many of my fellow professionals. It was immensely gratifying to me to see the overwhelmingly positive response by students, as well as by patients and their families who participated in these Personal Hours.

Early in the course, students were taught about many of the research methods which are used in neurobiology to identify normal and degenerating neurons in the brain. The lecture was followed by material on Alzheimer's disease in which the students learned how these methods have been applied to their disease in order to determine what areas of the brain are involved. Clinical correlations were used to show how an understanding of what areas of the brain are affected helps explain the signs and symptoms seen in patients afflicted with this disease. A Personal Hour followed the presentation and I asked a woman whose husband died of Alzheimer's disease to come to the class and discuss how this disease had affected her marriage, her feelings about herself, and her children. While students can benefit from reading articles about such issues, I have found that this

pales in comparison to what they learn by actively listening to an individual whose life has been thus affected. In another section of the course, we had lectures on cell growth and regulation, and on how tumors form in the brain. These were followed by a discussion of clinical cases where students were required to use reasoning skills to locate where in the brain a tumor was. Following this, two couples from The Compassionate Friends (a support group for bereaved parents) whose children died from brain tumors came to class and had an open, honest, and frank discussion about what physicians did during the time of their children's illness and death which was very helpful to their families, and what physicians did that was hurtful. These experiences underscore to students that medical education is not just an intellectual exercise, but also involves the acquisition of interpersonal skills that are of paramount importance in the care of patients who put their trust in them.

The underlying philosophy which guides me is the belief that the goal of medical education is to stimulate both the intellectual as well as personal development of students. Towards this end, I have attempted to incorporate course elements which promote cognitive and intellectual development as well as foster personal growth and development.

## Teaching Freshmen to Think—Does Active Learning Work?

Leonard Goodwin, Judith E. Miller and Ronald D. Cheetham, *BioScience*, Vol. 41, #10

*The following article describes the experience of biology instructors at Worcester Polytechnic Institute attempting to redesign introductory biology courses.*

*What struck me as I read this article is how quickly teachers forget the trial and error process of stepping into new territory in their teaching. We are told that students cannot learn if they are passive. We are told they must develop effective group skills to be successful in today's work world. We are told that we have a responsibility to "empower" our students to think critically.*

*Well and good.*

*As many of us attempt to do this, we must remember:*

- *Change isn't easy.*
- *Some changes take more time than we're willing to give them. We'd rather assume they didn't work and go back to our old ways of doing things.*
- *The more we do "all of the above," the more work we create for ourselves. When students are more active in their learning, they are more out of our control (in a good way). This means we must come up with more ways to monitor and*

*assess this learning.*

- *Active learning that is effective involves skill building and practice—which take TIME.*

- *After a lifetime of traditionally passive learning situations, the resistance students have towards active learning is substantial.*

- *Active learning must be carefully constructed—you must anticipate all the variables of the unique mix of students in the class. Groupwork, for example, tends to be much more effective if groups have been chosen strategically—providing a mix of gender, ethnicity, backgrounds, strengths and skills.*

- *And finally—let me draw a dangerous parallel. Sometimes teaching is like parenting. We do what's best for our students even though they might not be all that grateful at the time. We must trust that what we're doing will serve them well in the long run. This sometimes involves sacrificing our bid for "most popular teacher."*

Students entering science careers in the next century are likely to rely little on the factual information conveyed by their teachers. They will rely on problem-solving skills, collaborative work skills, and an enthusiasm for the rapidly changing challenges in their fields. A key recommendation of the report by the National Institute of Education (1984) on improving higher education was that faculty should design courses that enable students to be actively involved in the learning process. Likewise, the Carnegie Foundation report on higher education (1986) stated that "The undergraduate experience, at

its best, involves active learning and disciplined inquiry that leads to the intellectual empowerment of students.”

This article examines a redesign of introductory biology sequence courses for majors. The new sequence, redesigned to incorporate experience-based group learning, involved almost no lectures and placed heavy emphasis on students learning biology through completing group projects.

Rather than listening to lectures and regurgitating the material on tests, students worked in project groups and gathered their own information around topics such as the design of a closed life-support system for long-term space flight. Four weekly class meetings examined, evaluated, and integrated the material gathered for the projects. The laboratory focused on techniques and on independent experimentation that did not directly bear on the project topics.

An independent investigator traced attitudes and class performance of students involved in this course sequence including a group who took a revised version of the Biology I course. Questionnaires, group interviews and grades in advanced biology courses along with instructor comments in the advanced courses provided data for the study. The aim was to determine how the project-oriented approach is perceived by students and how it affects their subsequent performance.

The first round of data on the Biology I class revealed these results:

- Instructors overestimated their students' foundation of basic high school biology knowledge.
- *Students were upset by the lack of guidance they received while trying to carry out project assignments. They believed they did not have the necessary basic biological knowledge.*
- *Students said they preferred traditional lectures about traditional biological topics.*
- *Students felt positive about working in project groups*
- *Students said the "new approach" made them interested in learning more biology.*
- *Students showed a preference for problems that had more than one solution.*

Changes from Biology I for the Biology II course included the introduction of some overview lecturing (no more than once a week, often for only half a 50 minute period) and the incorporation of interim assignments

and feedback to guide students through each problem.

The questionnaire responses of Biology II students were dramatically different from their responses at the end of Biology I.

- *Students felt they had learned much more biology*
- *Students were much less concerned about the vagueness of the course.*
- *Students said the course stimulated their interest in biology even more than did Biology I.*
- *Students were significantly less worried about being unprepared for higher-level courses at the end of Bio II.*

Student attitudes toward the new Bio I course were gathered again more than a year after the course ended. Questionnaire responses were solicited from the 1989 students.

- *All these students continued to believe that they learned little biology in Bio I*
- *There was a dramatic drop, however, in preference for a traditional introductory biology course among the students who had gone on to advanced biology courses. Students who stopped after Bio II would still have preferred a traditional introductory biology class.*

A similar situation was observed with respect to the belief that Bio I created interest in studying more biology. That is, the advance students, looking back at Bio I more than a year later, regarded that course as having significantly stimulated them to a further interest in biology. These findings suggest that as biology majors proceeded with their education, the value of the project-oriented approach became more evident.

Although student attitudes toward a course are important, another test of the new project-oriented sequence is student performance in more advanced work. Were worries about lack of preparation justified?

- *The grade point average of the 1989 group is virtually identical to that of the others (students who took the more traditional version) – a B average*
- *Written comments of two instructors in the advanced courses suggest that the 1989 group had gained important learning skills. One instructor said, "This year's group was more receptive of the 'open lab' format. They were less likely than the previous year's group to expect the TAs or myself to tell them exactly what to do. . . . There*

seemed to be some sort of group esprit going. The students relied on themselves and each other much more than on the instructor. . . . I got few complaints about the difficulty of the homework. "

According to the other instructor, "This year's sophomore class is less afraid to ask questions. They seem more aggressive, and less likely to remain silent if dissatisfied. They also seem to have provided more highly creative answers on their essay exams. . . more alternative explanation than any preceding class I have taught. "

Students determined that it was their own hard work that was responsible for their achievement in advanced courses. It may also be that their project experience taught them how to go about learning biology in a more productive fashion and encouraged them to believe that original thinking is acceptable.

### **The 1990 Experience**

Changes were made for the second offering of Bio I and II. Problems were defined more concretely and the topic order was reversed—Bio I covered molecular and cell biology; Bio II—organismal and environmental biology.

We believe that a unifying theme and student-generated topics are worthwhile. The advantage of having a unifying theme is that each problem would logically lead to the next set of questions. For example, in a future course, we may ask students to address the question "Should Vietnam veterans

exposed to Agent Orange be compensated?" This question could provoke questions related to molecular and cell biology, epidemiology and plant biology.

To accommodate students' need to feel that they were learning biological facts, we included quizzes as 10% of the course grade. To provide incentive for group members to help each other learn, groups in which the average score was 90% +, all received 100%.

To provide a more substantial incentive for all students within a group to contribute to group work, we changed the grading such that group members' evaluations of one another were used as a multiplier (a decimal fraction between 0 and 1.00) for the group-written report grade (40% of the student's grade) awarded to each individual. This system improved evaluation of individual effort, and it made intragroup conflicts more evident. Students realized that their grade depended heavily on group dynamics and were more likely to complain about or confront problems, although not always successfully.

### **Conclusions**

Moving from traditional lecture to the project-oriented mode of instruction involved radical changes for both instructors and students. The instructors spent large amounts of time and energy revising their traditional approach, developing project topics, locating information resources, and working with students individually and in small

groups. Students were involved in a process of exploration, learning how to go about gathering information rather than being fed information and asked to memorize it. The new project-oriented course sequence seems to have encouraged students to learn how to learn.

### **Things to consider:**

- *The pressing problem of determining the factors such as conflict and group dynamics that affect project-group functioning.*
- *Reevaluating the questionnaires. Rather than just asking students how much biology they learned, the question should be divided into two parts: How much factual information did you learn? How much problem-solving skill did you develop?*
- *While it is important to determine the attitudes of students toward an innovative course so instructors can make the course more effective, it is unwise to use those initial evaluations as a basis for canceling the innovation. Student views change over time.*
- *Group work is probably more useful for biology majors than nonmajors. Students who take only one or two biology courses are often looking for an overview of facts and concepts.*
- *The project-oriented approach requires a substantial commitment of time/effort by both administrators and faculty to significantly change educational practice.*

## Recommended Books On Teaching



These books have been recommended by faculty developers throughout the US. The ones in bold are available for loan from the TEP library. Contact [gcooper@oregon](mailto:gcooper@oregon) if you would like to borrow one of these texts.

"Richard Pregent's *Charting Your Course: How to Prepare to Teach More Effectively*, Madison, WI: Magna Publications, 1994. Call Magna at (608) 246-3580. It's comprehensive and can offer a quick, efficient read because it encapsulates material in outlines, lists, graphs, and tables. Each chapter ends with a summary/review in outline form. It's packed with examples. There's not a wasted word in the whole book."

"I recommend Barbara Gross Davis' *Tools for Teaching*. Jossey-Bass, 1993. It includes lots of good, practical ideas and references."

"I second the recommendation of Barbara Gross Davis' *Tools for Teaching*, Jossey-Bass, 1993. The reason is that its organization is well-suited to trouble-shooting and providing quick solutions to faculty. While other books have equally good information, faculty have to consume time in finding it and digging it out of various places. I view Barbara's book as the best users' guide to date for the general faculty member."

"We work with a substantial number of new and junior faculty on our campus. The overwhelmingly favorite book is Barbara Gross Davis's *Tools for Teaching*. A back-up favorite is Bill McKeachie's *Teaching Tips*."

"McKeachie's *Teaching Tips* and Davis' *Tools for Teaching* are certainly two that I would suggest as well. I would also add Angelo and Cross, *Classroom Assessment Techniques*. This book can be helpful for inexperienced instructors as well as new faculty with some experience elsewhere."

"I found *Finding the Heart of the Child: Essays on Children, Families and Schools*, to be profoundly moving. The authors are Edward M. Hallowell and Michael G. Thompson. Published by the Association of

Independent Schools in New England, 1993. Although directed to independent school audience, there is much in it that applies to all of us, even us!!!!"

"*In Over Our Heads: The Mental Demands of Modern Life* by Robert Kegan (1994) Harvard University Press. Not only will you get a way to think about public school education, but for free you get a way to think about counseling, therapy, parenting, marriage, getting older, your teaching colleagues, and business relationships. What a deal. The Spanish phrase 'me partio' la cabeza' roughly translated means "broke my head open." This book changed the way I think this year."

"I suggest a forthcoming book for consideration: *New Paradigms for College Teaching*, Bill Campbell and Karl Smith, editors, Interaction Book Co. (7208 Cornelia Dr., Edina, MN 55435, 612/831-9500). This book is meant for college instructors who are relatively new. It's purpose is to tell new teachers about teaching techniques they may not have seen in grad school—writing across the curriculum, collaborative learning, inclusive syllabi, active learning, electronic means of communication with students, and so on. Each chapter is written by a practitioner, with a brief list of references for further study. The idea is to give relatively new teachers a taste of a wide variety of ways to help students learn."

## How Do I Make This Interesting?

*Adapted from The Social Psychology of Organizing, by Karl Weick*

Good teachers use many examples. It is in examples that concepts are made real, tangible and clear. In a lecture, discussion, or reading, examples are where the rubber meets the road.

But how do you make examples interesting? What makes some piece of course content intrinsically more "interesting" than another?

In 1971, Murray Davis studied some "interesting" scientific theories and analyzed them for their appeal.

He found that any proposition will be interesting to a group of people if it attacks assumptions that they take for granted.

For example, if a group assumes something to be a localized phenomenon, and it turns out to be more general, then it attracts their interest (e.g. Freud asserts that sexual behavior is not confined to adults, but it's also found in children). Conversely, if a group thinks something occurs generally and then finds that it is actually localized (e.g. in no other country do people smile as much as they do in America), then they will find that proposition interesting.

In addition to generalization, ten other categories into which assumptions can be grouped into are:

1) **Causation** - What seems to be the effect is actually a cause (deviant actions don't cause deviant labels, deviant labeling causes deviant actions) or what seems to be the cause is actually the effect (participative management styles don't increase productivity, the presence of productivity leads managers to adopt more participative styles).

2) **Opposition** - This assumption involves things that are similar and opposite. What seem to be similar phenomenon are actually opposite (radio and television were thought to be similar until McLuhan argued that they were opposite), or what seems to be opposite are in fact similar (people who join opposing social movements are in fact similar because both show the pattern of a "true believer").

3) **Organization** - Interest will develop when people assume that a phenomenon is disorganized or unstructured and then discover that

it is really organized, or when they discover that a phenomenon is disorganized when in fact they expected it to be organized. The discovery that a group of people who seem to be autonomous and "into their own thing" are in reality responsive to an underground group with specific limits on acceptable behavior illustrates the first half of this assumption; the second half is illustrated by the observation that presumed unity in the women's movement is not there (Curtis, 1976).

4) **Co-Variation** - What is assumed to be a positive co-variation between phenomena is in fact a negative co-variation, and vice versa.

Davis cites two examples of this assumption. The assumption that lower-income people are charged less for goods and services turns out to be wrong, and lower-income people in fact pay more for these goods. To exemplify the other side of this point, it was thought that a social group's desire for revolution decreased as the social-group's standard of living went up, but in fact it increases.

5) **Co-Existence** - Love and marriage, thought by many to be compatible, have been asserted to be in fact incompatible. Phenomena assumed to be incapable of existing together in reality can exist together.

6) **Co-Relation** - Phenomena that were at first thought to be independent of each other are in fact related. For example, social class and mental illness were thought for some time to be unrelated, and were later found to be related. Conversely, climate was assumed to be related to suicide, and was later shown to be unrelated.

7) **Function** - Where something seems to be an effective means to an end, it may turn out to be ineffective. And of course, things that were thought ineffective may in fact be effective in unexpected ways. The assumption that long meetings accomplish nothing is a good illustration of this category. Evidence suggests that during long meetings where nothing much seems to get done on the manifest agenda, a great deal of information is in fact being exchanged, and members are learning more about each other and how to accommodate each other's idiosyncrasies. Something assumed to be dysfunctional turns out to be functional, and that's interesting.

8) **Abstraction** - What seems to be an individual phenomenon is really holistic, and what seems to be holistic is in reality individual. Suicide, thought to be an individual characteristic, is in reality a societal characteristic; territoriality, thought to be societal, is actually individual.

9) **Stabilization** - What seems to be permanent is actually changing or what seems to be changing is actually not. Organizations, perceived to be stable, in fact keep falling apart and need elaborate maintenance to maintain their stability. On the other hand, conflict-ridden organizations that always seem in danger of destruction can go on for years.

10) **Evaluation** - What seems to be good is bad; what seems to be bad is good. Cancer is good because it is evidence of growth. Families are bad because they stifle adult development. This is a particularly good approach for starting lively discussions.

# Ideas For The Large Science Lecture

Peter Wetherwax, Instructor, Biology

This is a list of ideas I tried one quarter to get students more involved in a large class (115 students).

## Preparation

- Annotate your lecture notes with why you are doing a particular activity or covering a particular topic. It helps you keep in mind (and therefore helps your students understand) the "big picture" of the course.
- Write down potential answers to open-ended questions. Anticipating your students' answers will prepare you to get the most teaching mileage out of them.

## Improving Classroom Atmosphere

- During the first week, take pictures of students before and after class to help you learn their names. This can even be done in a large lecture class where there are no small group meetings. At first, learn the names of students who frequently participate and call on them by name. With a little work it is possible to learn the names of over 100 students.
- Place a suggestions box at the back of the room, and encourage your students to drop discussion questions and course feedback into it. Good questions can be used as a start of the next lecture. This may mean you have to change your plans, but why give up a good teaching opportunity? Suggestions students make like "please use recycled paper" can be implemented, giving them a feeling of ownership in the class.

## Increasing Motivation

- Whenever possible, use case studies to present concepts. Telling the "story" of an actual case can make an abstract concept seem real.
- Bring in controversial statements from the popular press to stimulate discussion. For example, in a genetics class, I brought in an article from the *Utne Reader* in which a woman suggested that women can reproduce without men and should. The class discussion dealt with the scientific possibility, not the moral issues.

- Sometimes for the sake of discussion, intentionally "deceive" the class by either taking a controversial stand on an issue that you may not actually believe or presenting an explanation that is incorrect but consistent with common misconceptions. In the latter case, the class eventually "sets you straight."

## Relevance

- On the first day, have students fill out a questionnaire in which they are asked to identify issues relating to a topic which they think is important and say why. Keep a list of these issues in your lecture notes, and introduce them back to the class as a whole whenever you can.
- Present a disputed issue to the class. Take a vote on opinions by a show of hands and have students write down their opinions. Pass out articles or summaries of arguments—some of which support one side of the issue, and some of which support another side. Students don't have to know that everyone is not getting the same thing. After the students read their arguments, take another vote. Finally, have groups of students fill out a form asking them to clarify the issue and discuss their position on it. At the end of class, take a final vote. Tally the results and share them with the class at the next class time.
- Another issue-related idea is to have students read original sources outside of class and answer homework questions about them. For example, have students read original research on homosexuality as well as an article from *Christianity Today*, and answer several questions designed to help them clarify what the studies show and what the opinions are. When students come back to class, have them work in groups and come to consensus on aspects of the issue. A all-class discussion can take this one step further.

## Class Participation

- Give students a few minutes to think of a solution to a problem or discuss it with their neighbor before asking for discussion.
- Present data that could be used to support a concept. Break the class into groups and have the students try to draw their own conclusions from the data. Have them write down their hypotheses and open alternative hypotheses up to the class for discussion.

- Present problems for the students to solve in class. Then give the students a few minutes to write down the solution in their notes or on a worksheet that they turn in before leaving.

### **Integrate Homework and Lecture**

- “Primers”: Give open-ended homework questions that students are supposed to answer without looking up in a book. Use these questions to start the next lecture.
- Have students compare homework problems in class and then come to consensus on the answer to a new question that takes those problems one step further.
- End lecture with a problem or question for the students to work on. This question can be used to start or clarify a point during the next lecture. It is not necessary to grade the students’ work. If you present a challenging enough problem, many students will try to solve it without the “carrot” of grade points.
- Assign homework that uses information from the students’ lives. In genetics, I had students do their own pedigrees as homework, identifying dominant traits and how they were passed down.

### **Involve GIFs**

- Integrate GIFs in to all parts of your course—not just grading or leading “outside” discussion sections. Have them give mini-lectures, have them help with small group activities during the lecture, have them take opposing viewpoints to your own to stimulate discussion. GIFs can help in modelling questions or confrontations. For example, my GIF accused me of taking a bite of his sandwich. This led to a discussion of DNA fingerprinting to find the culprit.

### **Evaluation**

- Spend 10 minutes after each lecture annotating your lecture notes with what worked and what didn’t.
- Keep copies of students’ work that demonstrates superior work as well as common problems.
- Have regular discussions with your GIFs to get their input about how things are going, what should be changed, and where to go next.
- Listen to the comments your students make to each other before and after class, as well as what they say to you in office hours. Listen for indications that they are

thinking about or using this material outside of class requirements.

- Annotate quiz questions after you grade a set of quizzes. Identify common misconceptions that need to be addressed as well as problems that may indicate something needs to be changed for next time.
- Use the Mid-term Analysis of Teaching (available from TEP) and always discuss the results with your students.

## *Small Group Instructional Diagnosis: A Student Feedback Process*

University of Washington, Center for Instructional Development

As instructors think about examining their teaching, they frequently seek insights into a variety of pertinent questions. For instance, does the course organization provide for optimal student learning? Is the presentation enhancing or detracting from the content? What material is seen as relevant or irrelevant? Is the pace of the course too fast or too slow? In an effort to answer such questions, instructors frequently seek systematic ways to obtain input.

Small group instructional diagnosis (SGID) is a process designed to help instructors answer such questions. The method, commonly conducted at midterm, uses class interviews with students to provide suggestions to strengthen the course, increase communication between the students and the teacher, and generally improve instruction. The process identifies not only problem areas but also ways to address those areas.

### **SGID Procedure**

The SGID process requires an experienced consultant to work directly with the instructor and the students in the class. The process is initiated when the consultant and the instructor meet to discuss the course and determine how the class interview process can best be used to provide feedback for instructional improvement. Then,

on the given day, the consultant meets with students in the class, in the absence of the instructor, to obtain the data. The consultant directs students in the class to form small groups, select a chair and come to consensus on answers to three questions. Although the questions may take a variety of forms, they always focus on strengths in the class, areas for change/improvement, and ways of making suggested changes or improvements.

The following are typical of the questions asked during the process:

1. *What are the strengths in the course?*
2. *What changes could be made in the course to assist you in learning?*
3. *How would you recommend that suggested changes be made?*

Following ten minutes of discussion, the consultant asks students to report to the entire class. The consultant collects and summarizes the group's ideas on the chalkboard, clarifying until group members are satisfied that the consultant understands clearly the information being reported. The instructor and consultant then meet to discuss the data and develop a teaching improvement process responsive to the data and the specific needs of the instructor.

### **Benefits to Students and Instructors**

Student and instructor response to the method has been outstanding. Students appreciate the midterm timing, which provides opportunity for changes to affect them and the heightened teacher awareness of student concerns. Instructors appreciate the personal interaction and supportive interpretation by a consultant, as well as the content of the data in a form which facilitates its use by the instructor in making changes.

### **Scheduling an SGID**

If you are interested, TEP staff is available to discuss the ways in which the SGID process can be used to meet your specific instructional needs. If you would like TEP to facilitate an SGID in one of your classes, it is best to contact us well before midterm of the quarter during which you would like assistance. Early planning will allow you to make the best use of the student feedback for instructional improvement. Contact either Georgeanne Cooper (gcooper@oregon, 6-2177) or Michael Sweet (mssweet@oregon, 6-2123) to make SGID arrangements.



*The Lizard* is published by the Teaching Effectiveness Program, Academic Learning Services, 65 PLC. To be placed on the mailing list, contact G. Cooper (gcooper@oregon).

Editors: M. Sweet  
Layout/ Design: G. Cooper  
Production: UO Printing, TEP  
Contributors: J. Norden

The Student Market Book Exchange allows students from every university in the U.S. to post information about a textbook they'd like to sell, and search for textbooks they'd like to buy. Users are able to browse books posted from the same institution they are attending, and to post to all institutions or to specific campuses. Forms are provided for listing the subject area, title, edition, and even the condition of the book in question. If there is extensive participation, the site could become a handy book-buying alternative for students.

<http://www.studentmkt.com>