DOCUMENT RESUME

ED 423 006 JC 980 401

AUTHOR	Marashio, Paul, Ed.
TITLE	Pedagogy Journal, 1998.
INSTITUTION	New Hampshire Community Technical Coll. System, Concord.
PUB DATE	1998-00-00
NOTE	93p.
PUB TYPE	Collected Works - Serials (022)
JOURNAL CIT	Pedagogy Journal; v5 1998
EDRS PRICE	MF01/PC04 Plus Postage.
DESCRIPTORS	Academic Achievement; Community Colleges; Higher Education; Instruction; *Learning; *Student Needs; Teacher Education; Teacher Effectiveness; Teacher Role; Teaching Methods; *Technical Education; Technical Institutes; Two Year Colleges
IDENTIFIERS	New Hampshire Community Technical Colleges

ABSTRACT

This annual serial volume contains 13 articles offering practical pedagogical ideas from faculty at New Hampshire Technical Colleges. After a brief preface, the following articles are presented: (1) "Variety Is the Spice of Learning," by Sandra Cole; (2) "Separating the Wheat from the Chaff at the Annual Conference," by Diana Wyman; (3) "Teaching College the 'Preschool Way' Yes I'm Sure," by Anita W. French; (4) "Lessons Learned from My Mentorship with Judy Honsinger," by Mary N. Boyle; (5) "A Novice Teacher Reflects on Developing a Teacher Portfolio," by Joe Perron; (6) "From the World of Becoming into That of Being: A Way of Learning," by Paul Marashio; (7) "Articulation Plan Between Physical Therapy Assistant and Physical Therapy Programs," by Laurie Clute; (8) "General Education Balance," by Nancy Marashio; (9) "Slow Down, Mr. Eddy, Puh-leeze: Disorderly Teaching (With an Attention Deficit," by Greg Eddy; (10) "Advising Students toward Responsible Behavior," by Joan Holcombe Larsen; (11) "A Letter from the Heart," by Nancy Roy and Susan Welsh; (12) "History Repeats Itself: Process Writing and the Classical Trivium," by Jane Whittington; and (13) "Language Disability, Literacy, and Open-Access Education: A Case Study," by Marion B. Schafer. (Contains 10 references.) (AS)

PEDAGOGY JOURNAL

Volume 5, 1998

"Learning can and often does take place without the benefits of teaching, but there is no such thing as effective teaching in the absence of learning."

Thomas Angelo & Patricia Cross

New Hampshire Community Technical Colleges & Institute

PEDAGOGY COMMITTEE

Board of Editors:

PEDAGOGY JOURNAL

New Hampshire Community Technical Colleges

PREFACE

Paul Marashio
Chair, Pedagogy Committee

If there is a common thread that weaves these differing pedagogy articles together, it is student centeredness. All these author/practitioners consciously focused attention on the student through pervasive teaching strategies that engage students in learning. From the enthusiasm bubbling forth from these articles, these authors are experiencing unprecedented teaching success through these learner centered methologies without a hint of sacrificing academic rigor or compromising on in depth coverage of material. For the many faculty standing on the sidelines skeptical with such inclusive methologies or taking a wait and see approach, these articles by faculty should dismiss any lingering doubt. Now is the time to get off the sidelines and get into the pedagogy game where students are the focal point of learning. Take heed in what these author/practitioners say, but more importantly be cognizant of their successes in teaching students how to learn. For you will notice, seeping through all these articles, student centered classrooms give us active learners intellectually engaged with the material. This engagement in learning often means the learner better understands the material and potentially retains the material for a longer time period.

Whether we sample an article or two or read them all, the excitement of these practitioners will flow through you, motivating you to become participants in the ever-changing pedagogy game.

CONTENTS

VARIETY IS THE SPICE OF LEARNING

Sandra Cole

Good workshops teach in two ways. You gain academic information but you also learn from observing the examples of the dynamic presenters, who are, after all, able to make a living by their ability to both educate and motivate. By using their example and their instruction, classrooms could take on the aspect of a well planned workshop – lively, attention-holding, and informative. By pacing our classes in the same way, we can build in a variety of activities that will enable our students to stay focused and learning from the beginning to the end of each class. Good workshop presenters practice what they preach and it can work for us too!

First the presenters get their audience relaxed and involved. Then they present material in a clear, understandable manner using a variety of instructional methods. A lively varied presentation kept learners involved. Here are some of the ways in which we can follow their lead and emulate their ideas and their effective methods of presentation.

Setting the Stage for Learning

Creating an atmosphere of relaxed alertness frees students to learn. An anxious mind is not a receptive mind. Humor breaks the ice and gives students a chance to open all their sensory channels, allowing material to come in. At the first class meeting, I ask students to introduce themselves, but to ease their way, I introduce myself first. It's fairly easy to do several minutes of a "stand-up" routine covering my educational background and current family doings. Having two teenaged boys in my household supplies plenty of " current material." Often the student introductions that follow are relaxed and amusing.

Once channels are open, a review of what they have studied previously or learned from their life experiences can serve as a foundation for building new learning. With their background information now at the forefront of their minds, the big picture of what is to be covered can be added onto their previous chain of knowledge.

To generate interest and get an understanding of student background levels, you can ask students to rate their present knowledge of the subject. Surreptitiously holding up fingers close to their bodies, they can signal you without exposing their ignorance or expertise on the subject

to their peers. With one finger meaning "Never heard of it," by degrees up to five fingers-"Use it all the time," at a glance you can get a quick and accurate understanding of how deeply you need to cover your current subject. This personal assessment can help students begin to own the process of learning, and students are more willing to invest into what they feel they own. Encouraging students to bring in questions from previous lectures and current readings can also ground each class in a firm base of knowledge to build upon.

But if we are to expect students to become enthusiastic about learning, we must actively display our passion for the material we are teaching. Students will "catch" our interest. An animated, expressive presentation is emotionally engaging. Enthusiastic teaching becomes performance art. And the wonderful thing about giving out enthusiasm is that it comes back to you many times over as you see the eyes of your audience light up with interest. A relaxed, entranced classroom is an ideal to which we can devote our energy and creativity.

Making Learning Easily Attainable

Our students have a formidable task. In my first year with the then Vocational-Technical College System, I was shocked to realize that my students were working MUCH harder than I had had to work in my leisurely four year stroll through my bachelor degree requirements. And unlike me in my carefree student days, many of them had to precariously balance a job and caring for families with their studies.

Our students are here to learn huge volumes of information in a relatively short time and our goal should be to help them incorporate it all. There's no rule that says we can't ease their way, straighten out the mazes and let them get directly to absorption of material.

Introductory materials for the class such as syllabi can be comprehensive, giving the student clear guidelines and expectations. Course Outlines can be shared with students so they know exactly what we hope to relay to them by the class's end.

Presentations can be tightly organized. Material can be presented in a clear Content-Participation-Review progression. Teaching the material, having the students use it, then reviewing to bring it together, helps to consolidate knowledge. By being provided outlines of the day's lecture, or actual lecture notes, students can follow easily, expanding on them with their own notes and connections as the lecture progresses.

We don't want to do everything for our students. Their effort is critical in learning. Note taking is one of the most reliable indicators of high course performance. The physical act of writing is yet another channel for absorbing the material that is seen and heard in presentations. But asking students to jump through extraneous hoops, forcing them to organize material that we presented in a disorganized fashion, is time and energy consuming and hampers the learning process.

Making Teaching Methods Fit Many Learning Styles

Workshops on learning styles are legion. Presenting material in auditory, visual, and tactile (hands-on) learning styles affords opportunities to access everyone's best learning channel. Varied presentations utilize stronger channels, stretch and strengthen students' weaker learning methods, and encourage deeper levels of comprehension. Using new technologies gives us new tools in addition to the traditional lectures, tapes, blackboard use, overheads, slides, videos, and lab experiences that are a backbone of our instructional methods. Choosing course methods which attempt to tap everyone's learning style engenders a varied, lively classroom presentation.

Making Learning Lively

If we vary learning experiences offered to students, we keep their attention focused and involved. Many of our classes meet for as long as two and a half hours. Unfortunately research shows that students may be able to listen to us for 90 minutes, but with only 20 minute spurts of highly focused attention and retention. We lose them every twenty minutes if we don't change our presentation, allow them a mental leap into another realm of learning.

By making our presentations lively we can engage students. We remember best that which is outstanding, different, humorous, or connected to our own lives. If our lectures cause students to think, wonder, or laugh, their minds are truly engaged with ours. Studies show the fastest lecturer speaks at a rate of 160 words per minute while we think at 400-600 words per minute. That leaves an appreciable amount of time when students can take a stroll away from our lecture and follow, hopefully, a tangential path. Such mental journeys connect their previous knowledge to what we are lecturing on. As students wander with us, the personal information they add joins with classroom information at an emotional level. We truly "own" and care about the information we physically

store in our brains. Emotion is the glue for memories. By engaging a student's emotions as we present material, we encourage processing at deeper, more meaningful and lasting levels.

But in order to keep them walking on the educational path with us, we must constantly reel their attention back in. We can vary such simple things as tone of voice or position in the classroom, but such small changes may not insure another twenty full minutes of attention. Audio-visual presentations and handouts can vary channels of input and capture attention for the duration of those activities.

But involving students in active consideration may better ensure that you have everyone's antenna up and receiving again. Requiring a question on the day's reading as a ticket to enter class, brings students in interested and involved in the learning to come. Even asking students to silently answer questions during your presentation will send neurons firing and promote increased interest in the information to follow. But after questioning, it's important for you to tolerate sufficient quiet time to allow students to seriously reflect on your question. Difficult as it may be, vigorously resist the temptation to break the silence. Valuable thoughts can go on when no one is talking and breaking concentration. When students think deeply in class, valuable contributions can follow.

Even asking shorter questions will bring students actively into the lesson. True-False questions can be answered by students holding up one finger for true, two for false. With multiple answer questions you can go around the room having students give answers in turn, or pass if they have no new answer to contribute.

We can encourage deeper student understanding of the material we present by realizing what we've found to be true over the years; you thoroughly and deeply understand something through the process of teaching it to others. One study found that we learn 14% of what we hear; 22% of what we see; 30% of what we see others demonstrate; 42% from repeats of seeing, hearing, doing; 72% of movies of the mind (student-made connections to their personal experiences); 83% when doing something that applies the new learning; and 92% of what we teach others.

The issue of allowing students to take over our job as instructors is worth pondering. I know from my own long ago college experiences that examples students offered have stayed more vivid in my mind than the instructor's theoretical lectures. And I know that my students were totally engaged when one of my students, who is associated with fertility

research at Dartmouth Hitchcock Medical Center, spoke of infertility studies linking marijuana usage with damage to chromosomes that might make successful pregnancy difficult. I taught them what chromosomes were, but she brought home very vividly what they do. It may be hard for us to realize that we are not the only potent purveyors of knowledge in our classrooms. But it is often a reality when teaching adult students with a wealth of experiences, and it is a great benefit to all, even us, to be active and equal participants in becoming educated.

Posing questions in the Think-Write-Pair-Share method gives students the chance to consider issues, make a written answer, then share their thoughts with others. In Pairs Check, one student does the work while the other watches and checks, then they change places. In the Jigsaw Method students truly become the teachers. The day's reading material is divided into sections with each section assigned to a different group in the class. Each member of a group carefully reads its partial section of the day's material then discusses it thoroughly with the group, making sure all have a solid understanding of the section. Then each goes to a different Jigsaw Group made up of an "expert" on each section. Each member of the Jigsaw Group then teaches the whole group the part which he mastered. When all have done their teaching, the whole reading unit has been covered thoroughly.

Class can be ended in an active way by asking each to write down The Muddiest Point, The Most Valuable Learning, or make a One Sentence Summary of the day's learning. Those feedback statements can be used in the introduction to the next class, effectively reviewing what was covered. If the students leave your class still in active discussion, you can congratulate yourself for making learning real and important to your students.

Variations in the methods of assessment you use can tap into different student abilities. Testing, journals, displays, observations, computerized activities, research reports, oral presentations, collages, demonstrations, and projects can be graded separately or included in portfolios. By asking students to exhibit their knowledge in varied ways, you make allowances for different areas of student strength and deepen the levels of learning.

The workshops from which these ideas have sprung are listed below. The presenters were inspiring and highly motivating. My apologies for intermixing their ideas and failing to give specific credit to the source

of each idea. Similar ideas were grouped together in order to facilitate learning and application, which is, after all, the overriding lesson each workshop presenter attempted to teach.

My thanks to:

Michele Deck for her Adult Learning Workshop from which many ideas about classroom pacing and variety were adapted.

Dr. Gary Phillips for his % division of learning that comes from different channels in his video "The 'As-if' Action," (EduServ, 1155 West 8th Ave., Vancouver, B.C.)

Marie Samaha for her workshop on Cooperative Learning

Dr. David Vawter for his "Teaching in the Block" conference from which some of the active learning methods were adapted.

The New England College Israeli Program Teaching Workshop for the Jigsaw Method

The New Hampshire Technical College Symposium for the Ticket to Class, Muddiest Point, Most Valuable Learning, and One Sentence Summary ideas.

SEPARATING WHEAT FROM CHAFF AT THE ANNUAL CONFERENCE

Diana Wyman

Like many annual national conferences the HAPS or Human Anatomy and Physiology Society conference is a series of seminars, workshops, exhibits and society meetings. Its agenda satisfies those that are politically active and want to schmooze, run for office and steer the organization, those who like to explore and share pedagogy, those who need the scientific updates by experts, and lastly, those who are searching for the perfect text or just the right compact disc for anatomy lab.

Most of the time I try to sample the best of everything. At other times I have a particular need or interest the conference can address. This year's HAPS offered several interesting scientific update seminars that I chose to attend, the usual selection of society meetings and exhibitors, and several pedagogy workshops. Many of these pedagogy workshops dealt with computer technology: Computer Supported Instruction, Multimedia Labs, Computerized Programs in Lieu of Dissection, Computerized Approach to Human Physiology. Other workshops offered teaching strategies of a less high tech nature including critical thinking skills, cooperative learning, collaborative learning, putting PHIZ into teaching physiology, and still others were very specific, offering ideas for teaching difficult concepts such as acid-base interpretation. The first impulse was to get excited about all of these, but there are conflicting schedules to consider, a limited time frame, etc. I find it best to set some priorities based on needs and proceed on that basis.

My choices this year were to explore some alternative teaching methods, to find ways to foster critical thinking skills and to assist students in becoming more independent learners and accept more responsibility for their own learning. Based on these goals I decided to forego the high tech workshops and zero in on some more global teaching techniques. I selected Cooperative Learning in the Anatomy and Physiology Laboratory, Creating a Multisensory Learning Environment in the Anatomy and Physiology Lecture, and Collaborative Learning in Physiology Lecture.

Each of these workshops was quite different. The flavor of each was different depending upon the subject matter of course but also the style, expertise and attitudes of the presenter. Each workshop was different in overall quality, but each was useful and valuable to the curriculum. I used the information from each in a different way.

Cooperative Learning

The workshop on Cooperative Learning in the Anatomy and Physiology Laboratory had the flavor of a well-brewed cup of Columbian coffee, a blend of hands on and how to and time for questions and to share experiences. It was rich with information, well organized and presented with confidence by someone who had successfully used this technique. They had molded it into a shape based on their resources and their students' needs. As I participated in the workshop, it became clear this could be a valuable tool for me to have. This technique had much of what I decided I wanted. It involved an active learning process without so much dependence on the teacher for answers. If I did it right, it could work for me and satisfy some of my needs.

In cooperative learning students work in groups, and the premise is that the success of the individual depends upon the success of the group and the success of the group depends on the contributions of the group members. Without the contributions of the members, the group will not be a success and neither will the individuals.

Each group receives a list of competencies that need to be addressed in the laboratory session and a list of resources they have access to. Often, since this is an anatomy laboratory, the labs involve locating and identifying body structures. Resources include such things as slides, models, dissection specimens, computer programs and atlases. The group works with the resources of their choice to accomplish their goals. There is much less dependence on the instructor and more dependence on each other for the what and where of the anatomical structures. Each individual in the group encourages the other. Students become more responsible for their own learning and for the group's learning. Groups present what they've learned and gain confidence. The instructor acts as a guide and a resource. At the end of laboratory sessions during the wrap-up, information is shared by the groups. Also during this time the instructor can introduce issues of form and function.

The workshop provided the nuts and bolts to set up cooperative learning. Factors to consider were obvious like a suitable space, the time constraints, resources available to provide each group with quality tools to work with, and steps to ensure students have a clear idea of how the members of the group can function together. Workshop participants worked on developing a plan for cooperative learning addressing some of the issues listed below.

1. What resources do the students have for review before the class meets? What preparation would you expect from students?
2. How many students are in each class section? How many students will be in each group?
3. How many groups can you reasonably expect to handle?
4. How much time is available in the class period for group activities? How much time is needed for additional explanation, for wrap ups, quizzes, etc.?
5. What student materials are available to students during the class period
6. What activities do students usually engage in during the lab period? How will this be similar or different to what you want to do now?
7. What job descriptions will be used for members in the group?
8. What follow-up on activities is expected of students? Homework? Computerized exams? Lab reports?

There was time for questions and concerns. Several people at the workshop were using cooperative learning and shared their successes and failures. It was nice to know where some of the quicksand was and it was apparent that there was not one right way but several ways to implement cooperative learning. Again it seems that not one size fits all.

Introducing Cooperative Learning in the Anatomy and Physiology Lab

I have adopted this technique for some but not all of the labs in anatomy and physiology. I've included a sample of the materials I distribute to students for the histology labs. They include the "old" lab handout with an explanation of what is required in the unit in terms of objectives, homework etc. I have not changed this because not all anatomy and physiology instructors have chosen to use cooperative learning. There are other ways to accomplish these same objectives. Academic freedom is to be respected. There are also information sheets specifically for cooperative learning that explain the purpose and dynamics of the group. They also answer the foremost question on the minds of students: grades. There is also a resource sheet to make students aware of what is available to them. Not all groups would choose the same learning path. I should add, because it may not be obvious, that the group chooses the resources it wishes to use within some limits. For example, in the histology lab students must view slides with actual tissue sections. Students then choose any additional activities they want to.

Anatomy and Physiology I
Histology
Cooperative Learning

1. Students work together in groups of 4 or 5. Each group has the following:
   a. Administrator - chosen by drawing straws or volunteer. Leads discussions to consensus, makes sure everyone does their job, insures all tissues are examined, updates and passes in the "Resources Check List"

   b. Reader - collects all reference type materials (atlases, videos, overhead slides etc.) that the group wants to use.

   c. Demonstrator - There is one for each tissue type. All members of the group must be a demonstrator for at least one tissue. (Yes, some people have more than one job.) Gets a microscope and their slides and returns them when finished. Insures all members of the group have the opportunity to view the slides. Checks on the progress of the group concerning identification of their tissue. May ask the reader for reference materials to assist in the identification of their slides

   d. Verifier - ensure everyone in the group leaves the lab with the correct identifications. Seeks out instructor when the group needs assistance. Works with other groups to make sure their answers are consistent with other groups.

2. Group Grading
   a. Homework - if all members of the group pass in their homework on time and get a 90% or better, they may each add 3 points to their grade.

   b. Lab Exam - Exams are taken as individuals-not as a group. If all the members of the group get 80% or better, each member may add 3 points to their exam grade.

Cooperative Learning
Histology

Resources Used by the Group

	Group Activity Dates	Individual Activity Dates
Microscope Slides		
Overhead Slides		
Laboratory Manual		
Text		
Open Lab Time		
Video (epithelium)		
Video (connective)		
Video (muscle)		
Computer Assisted Instruction		
Other		

Group Members:

Administrator _____

Reader _____

Verifier _____

Custodian / Demonstrator _____

One of the most obvious things that has happened as a result of forming these groups is that I can manage to spend all the time necessary with each group checking on progress and making suggestions. There are fewer questions beginning with, "Can you show me where the..." and

many fewer, "I can't find the..." Groups of four or five students are so much more manageable than eighteen individuals. Before, I never seemed to get to everyone. This is much fairer for students. There is time to wrap up what we've done and introduce a thoughtful question or two. Students do take longer searching for things on their own, but they don't waste time immobilized by an unanswered question.

Of course, there were things that did not go well. Some students were reluctant to spend their time with the group. Some students felt they were being kept back. Others wanted to sit back and let others do the labs. The administrator of the group is a student and does not carry the clout of an instructor and is often reluctant to say anything about a student's level of participation. At first I left the administration and activities of the groups strictly to the students. By the time I got to the unit on muscles I decided it was necessary to be more directive in terms of the resources and activities the students would use and to reinforce the division of labor decided upon by the group. This is working much better. Once I began to address the level of participation of a student, the problem of lazy students ended. I am very diligent about the wrap ups and exactly where students should be at the end of lab sessions.

So I have had some success, and I have had some problems. Will I make some changes? Yes. As a result of the workshop I have access to some expertise, the presenter who has made himself available for questions and advice. I have corresponded with him when I've had questions and have always received a response. All of us in the workshop are tied together by e-mail as well. It's nice to have this support system.

Collaborative Learning and the Physiology Lecture

Collaborative Learning in the Physiology Lecture was quite a different workshop. The flavor was not unpleasant but rather indistinct and hard to describe. The instructor's goals for collaborative learning in this workshop were for students to develop a more positive attitude toward the course work, gain confidence in their ability to learn, achieve a higher level of understanding of physiological processes, retain the material for a longer period of time, and cover more material than they could by attending lecture. A primary goal of the instructor was to cover more material by having students do the work.

The plan is to set up learning groups in such a way that its members could get together based on their home addresses, shared classes, schedules and so on. At the very least each would be connected by e-mail. Each group of four or five students received an outline of the chapters cov-

ered at the beginning of each unit; they worked from these outlines to meet unit competencies. Groups were to generate questions in their study sessions and e- mail these to the instructor. Answering questions became the backbone of the lecture. Unfortunately, questions were often unrelated and the answers did not begin to provide a complete picture of the physiologic processes. Confusion reigned.

The instructor's plan assessed the success or failure of collaborative learning by evaluating the questions asked. The higher the cognitive level of the question, the greater the student understanding and the more successful the technique. Not all students would ask questions and unfortunately, the questions generated were of the most basic nature. Students lacked the knowledge to ask questions about the consequences of physiologic failures and abnormalities or how the failure of one body system would impact other systems in the body. The questions demonstrated the students did not accomplish even the least challenging unit objectives. Evaluation of student learning by unit exam revealed the same.

It was clear to the instructor that collaborative learning had not achieved its goals pertaining to student learning or student attitudes. It was not clear to us that the instructor knew why or had tried the appropriate avenues to find out why. We saw that students were strangers and had a low level of comfort with each other. Students were reluctant or unable to collaborate in a group. We saw students were unable to grasp concepts from the resources and time available. Collaborative learning used this way is difficult and time consuming. It's unreasonable to assume that students can cover additional amounts of material. Comments and remarks were made to this effect.

I perceived what seemed to be insufficient thought and planning. The presenter lacked a well researched and thought out plan of action. Problems were solved as they occurred which seemed to be often. I, as well as other workshop participants, wondered as much about these solutions as we did about the original plan. However, this workshop did teach me some very important things. Don't try methods you're not excited about or believe in for the sake of getting a computer. Computers are cheap by comparison. Time spent in planning, rethinking and revising is time well spent. Nothing is ever as easy as it sounds. And don't work in isolation. Lastly, don't jump into the lake before you've tested it with your big toe. It might be much colder than you think. If it is ice cold, all you've risked and lost is a toe. Where would you be if you jumped in head first! You'd be where this instructor is now.

The workshop ended in the large pit the presenter had been digging for himself in this course. In fact, he was still digging in an effort to force students to work together.

In the aftermath of this workshop a few participants sat and talked shop to pass the time before moving on to the exhibits or yet another workshop. Some of those who remained were currently using collaborative learning on a limited basis and were willing to share their ideas and expertise. The discussion soon focused on using case studies where students worked in groups to address issues and questions related to current anatomy and physiology lecture topics and the particular circumstances set up in a brief written scenario.

I liked this idea and adopted it for an anatomy and physiology lecture class. In this class students work on the case study in groups of four or five for a class period that lasts about fifty minutes. After discussing and researching the questions, a single case study report is generated. Case studies and collaborative learning offer a way to introduce a higher level of learning and understanding into my lecture class.

A case study I developed and use during cell membrane transport mechanisms is included. It requires understanding and use of information rather than rote memorization. Students found the case study challenging. Answering the questions required the high level of knowledge and understanding. I feel comfortable with students using collaborative learning in this more limited controlled way and for this specific purpose.

Anatomy and Physiology I
Case Study I

Mr. Wu is a middle aged man requiring renal dialysis after a number of years of a slowly advancing kidney disease.

1. Knowing the functions of the renal system, what principal problem does Mr. Wu have as his kidneys fail?
2. In renal dialysis Mr. Wu's blood runs through membranous tubing that is submerged in a tank of dialyzing fluid. What characteristics of the membrane can control what enters and leaves Mr. Wu's blood?
3. What components of the blood will not cross the membrane? What will restrict them?
4. How is the solution set up so that substances like urea, a waste product, leaves the blood and other substances like glucose do not?

5. How is the solution set up so that Mr. Wu's blood volume does not increase or decrease to any great extent?
6. One day Mrs Wu who sets up the portable dialysis unit at home was not thinking clearly and added only water to the dialysis tank. What happens at the level of the membrane? What are the consequences for Mr. Wu? Be as specific as you can.

Use your text as a reference in cases like question #3 where you need to find out the major components of blood. Discuss each question and come to a consensus. Write as clearly as you can in complete thoughts and sentences. Answer the questions you are sure of first. Have some one look up what ever you need to while others write to use your time most efficiently. This is a break from the usual. Don't let it turn into an anxiety attack; rather enjoy solving the puzzle

Creating a Multisensory Learning Environment in the Anatomy and Physiology Classroom

I assumed this workshop would suggest several ways to present difficult concepts in anatomy and physiology. There are concepts that students tradionally find difficult. The workshop offered a variety of hands on activities to supplement lecture topics. The basic ideas were good and the workshop itself was beautifully organized with beads and appropriate colors, craft foams, markers, plastic discs, tootsie rolls and marshmallows. All the materials were organized into bags and baskets and all with labels. They were great ideas for some, but I knew right away that this was not for me. These techniques seemed more suitable for smaller classes and for students who are getting their first exposure to biological sciences.

Books, Models, Software and Deals

Exhibitors are among the most cherished people at the conference. They provide a view of new texts and materials, good deals, door prizes, social activities, and a much needed cup of coffee at critical times.

I enjoy looking through new texts especially those not designed specifically for an anatomy and physiology course but are good references for anatomy and physiology students. Most of the time it is possible to get complimentary copies of these texts to have on hand. I also force myself to make the rounds of the software available. I am not terribly taken with most of these programs because most of them are too expensive in terms of cost-benefit ratio. For example, there's a bone box pro-

gram that allows you to view a bone and turn it around to see all angles. Its cost would be about seventeen hundred dollars. Why would I want this program when I have bones that students can pick and turn by themselves and have a much better idea of their shape size and unique markings? I also don't have to worry about the box that the bones are in failing, crashing or freezing up in the middle of a lab.

After saying such negative things about computer programs I confess that I did see a histology program that was quite impressive. Histology is a difficult subject to teach, because even though one can show slides and point to the various pieces and parts of a tissue, there is a lot of one on one at the student microscopes. It's time intensive. The histology program is like having an assistant. It points and circles and labels and explains. Not only that, but I know exactly what it told and showed a student, and it tells each student the same thing. It also can work hours that an instructor is unavailable. Actually it is better than having an assistant. I've made using this program a regular part of the histology lab exercises. Before this our use of computerized anatomy had been strictly an after class supplement. I like this program, and I plan to do more with computers but in a carefully planned way. When the computer program can do something better than the present resources, then it is time to use them.

Renewal

As a post script, along with the discovery of new ideas I introduced to my students, I enjoyed spending time with others who also like to discuss body parts and interesting new bits of information concerning physiologic activities. It renews and refreshes me to be with other science instructors who enjoy teaching. I enjoyed being with people who are concerned about their effectiveness as teachers and the success of their students. This is also a very important part of every conference.

TEACHING COLLEGE THE "PRESCHOOL WAY" ...YES, I'M SURE!

Anita W. French

As with most adjunct faculty, I have another job along side teaching college students. My position as a preschool teacher brings me as much satisfaction and enjoyment as working with adults at the college level. While most adjuncts are teaching students what they practice in their "real" jobs, I find I practice what I preach as a teacher to students both young and old.

Do you remember?

Do you remember the first day of school as a child? We wanted to choose just the right outfit, being careful to pack all the necessary materials days in advance. Remember wondering what the new teacher will be like? Will he or she like me? Where will I sit? Will any of my friends be in my class?

Preschoolers still come through the door every year with that look of both excitement and apprehension. Some cling to their mom or dad; others let out a sigh of relief when their neighbor drives in behind them. The sight of something familiar or comforting helps make a new experience a little easier. I always choose to serve a snack everyone likes, goldfish or teddy grahams. Food is a great ice breaker. There are many smiles when children tell me, "My mom buys these too" or "These are my favorite". If nothing else, I make sure everyone looks forward to great food because things are never that bad if your stomach is full. My smile and casual approach say, "It's going to be okay; just give it a try."

Keeping the comfort level going

My college students, especially the first semester freshmen, arrive with the same mix of panic and enthusiasm on the first day of school. The class is always a collection of confident, "social animals" who sit in the front row while more guarded students cling to their notebooks and position themselves in the far corner. My approach with the anxious adult is much the same as with a nervous preschooler; offer them a neutral food and learn their name first so they don't melt into the woodwork.

During the first couple of weeks, I ask them questions with no right or wrong answer and smile a lot. My message: "it's going to be okay; just give it a try."

Predictability is a characteristic in my classroom that has been helpful to both old and young. My little ones know that after they arrive, there will be time to say hello to a friend and find a favorite toy. Everyone comes to circle, and I put their picture on a mat so the children know where to sit. We share a story, check the weather and then find out what activities are going on that day. It is the same each day, and that brings with it a certain comfort level. My little ones know what to expect... and so do my college students.

I arrive at my adult class early so that I can answer questions for everyone who does not want to address me in front of the class. I start each day by outlining what I expect to cover and how I am going to do it. I ask if there are any questions about the reading or assignments and offer to check progress during breaks. One of my favorite "tricks" when I teach adults about testing young children is to break the routine my adult students are used to and discuss their reaction and discomfort during unexpected change.

Instruction for lots of kinds of learners

Working with young children reminds me often how differently each person learns. My preschool classes always have a mix of learning styles and abilities, all appropriate, all individual. The "easy" ones are those who process my verbal instructions, never need to have it repeated or followed through with reminders. More often than not, there are more who get the first part, but miss parts two and three, or those who miss the verbal instructions altogether and look to the visual. There are also those who watch for several minutes and then complete the task independently as if it were second nature. In order to reach all the different learners, I explain the process once, refer to a model, explain it again, leave the model out and check back often to fill in the missing pieces as needed.

I find I have to use much the same process for my college students. I first explain the assignment verbally while students have the instructions in front of them. If appropriate, I present the model or models so the visual learner can begin to picture it in their minds. I continually refer back to the assignment until it is due, asking students if there needs to be clarification or a check for progress.

The "process" for young and mature learners

Helping students process or "construct" the information we hope they will learn is another area where I find similarities between young and mature learners. On a recent unit on insects with my preschoolers, I used a number of techniques to help the children remember some facts about bugs. We read stories about insects (for the auditory learners), we looked at pictures of bugs (for the visual learners), we built models of bugs (for the hands-on learners). We discussed bugs in our large circle for those who are confident speakers and for those who like to listen. When playing bug games in small groups, I made sure each group had some students with strong skills to model for the more challenged child who would be able to see how the games were played and better foster their development of the skills. We sang bug songs for the musically inclined and danced bug movements for the whole body learner. By the end of the unit, every student remembered that insects have six legs and three body parts and a whole lot more... and it was fun!

I use a variety of approaches with my college students as well. Fortunately, our classes meet in block times, usually once a week for two or three hours. This is extremely challenging for both students and the instructor if the only teaching technique used is lecture. Maintaining attention and productivity requires many of the same techniques from my preschool classroom. I lecture for the auditory, discuss for the verbally strong, do small group activities with a mixture of abilities to model and follow. We stretch, we chat, we share and yes, we sometimes even dance and sing.

Our biggest challenge

My approach to teaching both children and adults does have its similarities. My role as both a preschool teacher and adult instructor challenges me to find many different ways to share my knowledge and encourage students to share theirs. You don't have to be in early childhood to remember this. A stroll down memory lane to our favorite teacher or most feared instructor, our favorite subject or most challenging should jolt our memories to remembering that people have different learning styles, different strengths and something to say, though it may be in a different way than the student next to him or her. As a teacher, I think our biggest challenge is to find a way to unlock the most potential in each student and give them the opportunity to "shine", and that may just take the "preschool way".

LESSONS LEARNED FROM MY MENTORSHIP WITH JUDY HONSINGER

Mary N. Boyle

My mentor, Judy Honsinger, Associate Professor at New Hampshire Community Technical College at Claremont, teaches science courses in the Allied Health and Human Services Department and the General Education Department. I teach sciences in both of these departments, too. My mentorship with Judy came about because it was a requirement of a course I took through the University of New Hampshire Graduate School as I pursue the Masters of Science in Teaching (MST) at the College Level. I chose Judy because she is also a medical technologist (as I am), she has years of teaching experience, and she is a very kind, wonderfully patient individual willing to share her wealth of knowledge. In this article I describe the main lesson I learned, Judy's teaching style, my teaching style, and the support I received from Judy through periodic conversations throughout a very challenging semester.

I learned there is no one prescription for teaching that fits everyone who teaches. There are numerous ideas in the literature, many of which may be effective for one teacher or teaching situation and not the other. Instructors become accepting of the unique teaching style which best suits their personality and the subjects they teach. This acceptance is part of the maturation in the learning process that promotes better teaching. It is a result of reflection upon past teaching and learning experiences, present ones and new ideas and their connections. To make sense and interpret this evolution is a continual process which forms itself and reforms itself and this change is learning.

Judy has a style quite different from mine. In the lecture for the chemistry class she is very methodical in her presentation, progressing from a definition, adding on to this using the chemical equations, and then demonstrating the concept to the class using examples from everyday chemistry. She pauses to note if the class follows the logic. This seems to be a classic style which I could follow and felt familiar to me. Judy provokes interaction with the students by giving them a problem to solve in class then asks one of them to volunteer the answer. If the answer is incorrect, she asks if someone has another answer and then she discusses how the correct answer was formulated. I liked this method because it

didn't make the incorrect answer the subject, so the students would continue to offer answers without worrying if they were wrong. When a student asks a question, she involves other students in searching for the answer rather than immediately answering the question for them. This is a method I employ. This is reassuring to me because I feel as if what I am doing is all right.

Judy and I discussed her reaction to my sitting-in on her class. I was surprised that she felt nervous about my observing her class since she has been teaching twenty years. Although there was a brief explanation to the class about my presence and reassurance that their performance was not at issue, she noticed that her students were quieter, too. Similar comments came from another instructor whose class I observed this Fall semester. I expect that when I am observed that I will also feel the same discomfort and so will my students. Would a day come when there were instructors sitting in a class to observe and it would go unnoticed because it was such a common occurrence?

Although she teaches microbiology as well, Judy's first love is chemistry. I plan to go to the lab class for chemistry, too, as I have heard about the inventive way she uses experiments to illustrate a chemical concept. Many of her students are fairly new at learning. Some of her methods are aimed at reaching the learner who is concrete-active as described in David Kolb's model of experiential learning. One of the ways she helps develop reflective learning (using this same learning model) in two of her advanced lab courses has been the use of learning journals which she explained in her article for a previous Pedagogy Journal. In her words, "Without the ability to "talk the talk" I felt the student did not fully comprehend their subject. It was to this end that I required the keeping of a journal..." This learning tool, reviewed weekly, provides immediate feedback to students and helps Judy get to know her students which better accommodates their learning.

The classes I teach have an enormous amount of vocabulary that must be learned in order for the content to be understood. The phlebotomy course requires the student to learn a great deal of medical terminology, as well as anatomical terms, and laboratory tests which often use chemical terms. It is a whole new language for them. This certificate program can be a "one shot deal" for many of the graduates. For others, it can be considered an introduction to medical laboratory science. Some phlebotomists have decided to climb the career ladder by pursuing an associate degree in the medical laboratory technician program. The basic anatomy

course also amounts to a new language with anatomical, physiological, and chemical terms encountered in full force. For some, this course is their introduction to the practical nursing program, to the massage therapy program, or the medical assistant program; for others, it is in fulfillment of a science requirement. When students come to class with a varying degree of learning experience, learning the new language of medical science can be overwhelming. Therefore, the objectives of these courses must be clear so that they understand what lies ahead, that is, they must know what my expectations are of them. Even though students are provided with this information many of them do not know how to utilize the objectives as a learning tool.

On the first day of class I try to help open the lines of communication. I tell them that I am one of their many learning tools. I let them know I am approachable and they are invited to see me during my office hours or right after class if possible. I introduce them to all the other learning tools as well, which include the text, the learning objectives, visual aids (plastic models, equipment, videos, computer software), and the schedule of lectures, tests, and projects. I repeatedly point to these tools and encourage their use through assignments and remind them to refer to them as often as it takes for them to reach to the content. They are given examination policies, one of which is that a student scoring lower than 70% must schedule a meeting with me so that a strategy for success can be planned together. Their first homework assignment is to write a few paragraphs about how they learn best.

Students may, at times, come to class with things going on outside the classroom that affects their attentiveness in class. Judy and I are aware of this when it happens. We can "read" it on the students' faces, detect it in their comments, or by their lack of engagement in learning. But the question is, where does the responsibility of the student end and the teacher's begin? Or, is this a simultaneous process in which both must be responsible? I believe it is the latter. Certainly, we can't read each other's minds, so someone needs to step forward to define the problem so that a plan for a solution can be designed. In most cases this is the instructor's role. Some students are shy, some students are tired from activities outside of academic pursuit, or possibly, students' expectations of themselves are lower or higher than their capabilities afford. The value of conversations with Judy were very supportive and boosted my confidence because I heard her voicing many of the same concerns along with her years of experience in teaching.

I feel the greatest frustration, anger, and sadness when, somehow, this communication fails. That is usually when I approach Judy as I am ready to take the majority of the blame in these situations. What I hear from her, the department chair, and other instructors is that I am doing all the right things and that I am taking too much of the responsibility upon myself. I feel the frustration of my students. I listen to their frustrations and I must remind myself that sometimes their struggles are part of the learning process. Sometimes their struggles are not academic and are beyond my scope of the classroom. As I read over my philosophy of teaching statement, I realize the feelings I have for my students' difficulties is a different issue than how I wish to be utilized as a teaching tool. Some of my most helpful consultations with Judy have been discussing problems we have with some of the students in general. Most of these problems seem to relate to communication issues.

Accepting my individuality while tolerating incongruent outcomes is my challenge. My strong points are my deepening mastery of the subject matter, my ability to put the content into simple terms, my creative ways of presenting a topic, and my enthusiasm and interest for my subject. I try many different ways to reach my students and use many different methods. Sometimes this addresses their learning style or perceived learning style and sometimes it exposes them to another style that they hadn't yet been exposed to and constantly stretches their tolerance for learning in a different way.

Writing this paper has made thoughts about teaching more tangible and maybe is making it a little easier for me to begin a plan for continuing to improve. The mentorship has been a strenuous and emotional exercise from which I have gleaned more clarity about who I am as a person. It has meant that I have been more critical of myself as a learner and a teacher. I am beginning to appreciate individuality as a meaningful element in teaching as I compare and relate to my mentor, Judy Honsinger. To experience firsthand how valuable having a mentor can be, I realize, is the essence of teaching. We as teachers need to make sure that students see us as their mentors. Mentoring has meant modeling, supporting, listening, and learning. It is a terrific learning tool.

REFERENCES:

Brookfield, Stephen D. *The Skillful Teacher: On Technique, Trust, and Responsiveness in the Classroom.* San Francisco: Jossey-Bass, 1990.

Honsinger, Judy. "Adventure in Teaching." *Pedagogy Journal,* 1996, *3* (1), 47-50.

A NOVICE TEACHER REFLECTS ON DEVELOPING A TEACHING PORTFOLIO

Joe Perron

A novice teacher reflects on developing a teaching portfolio

As educators in a society that values progressive and pragmatic reasoning, we are constantly challenged to reflect upon the mission and value statements put forth by our educational institutes in hope that the mission and values of the institute will match our own philosophies of education. The philosophy to educate a student as holistically as possible in the liberal arts may be challenged by the need to produce a student who is technically job ready in as cost effective way as possible. For the novice teacher, who must be aware of the institute's purpose, mission, and vision, the real challenge is learning how to blend one's own philosophy to that of the institute.

As I enter into my fifth semester at the University of New Hampshire's MST in College Teaching program, I have become aware of several methods that allow the novice teacher to examine his/her direction in teaching. One of these methods is known as the teaching portfolio. Though this method is not new to faculty, it is gaining popularity among teaching assistants as a way to assess one's teaching strategy and effectiveness.

The teaching portfolio is a collection of one's teaching philosophy, course syllabus and outline as well as course evaluation tools. The portfolio concludes with a lesson learned feature that allows one to summarize the effect of the portfolio upon one's teaching.

During the past year I had the pleasure to work with several mentors at the New Hampshire Community Technical College in Claremont to develop a teaching portfolio based on a course that I was teaching in the Occupational Therapy Assistant program at NHCTC. I found the philosophy statement and the lessons learned to be most beneficial as I struggled to develop a sense of who I am as a teacher.

Following are the lessons learned and my philosophy from the portfolio that I completed early in the spring of 1998. I need to note that I have revised some of my philosophy to become more focused on student learning and less on my own teaching effectiveness. I plan to continue to update and make changes in each section of the portfolio.

Lessons Learned:

As I reflect back upon the completion of my Portfolio, I begin to see the entire process from start to finish flash before my eyes. Thoughts race as I recall the many hours I spent confused and unsure which type of direction seemed best for this Portfolio. Should I reflect back upon my achievements in the community? Should I focus more on the student needs? Or should my direction be centered on the State of New Hampshire's promotional process?

All these questions seemed to distract me and to keep me from finding the true nature that this Portfolio eventually evolved into during the past few months. I struggled with the educational theories of Seldin, O'Neil and Marris as I tried to understand their rationale for using the Portfolio. Furthermore, I began to doubt my ability to understand what goes into successful teaching strategies.

The more I read about Portfolio writing the more confused I became. Then, after rereading Laurie Richlin's article "A Different View on Developing Teaching Portfolios," it occurred to me that my entire approach had been misdirected. Richlin notes in her article that the teacher needs to choose reflective pieces in order to help structure the direction of the Portfolio. That piece of information finally became clear to me. I reflected back to sixth grade and I recalled how my favorite teacher would constantly ask the class to reflect on goals, to reflect on methods to reach those goals and to reflect on how we could measure our success. I always felt that his words were the directions for all things in life. Then it occurred to me it wasn't about the words he gave us: rather it was about his beliefs and his position about teaching. I then realized that the key to my Portfolio lay in developing a Philosophy statement that reflected my beliefs about teaching and not about the outcomes I expected from each student.

Once the Philosophy statement was completed, the remainder of the Portfolio seemed to fall into place. Here are my lessons learned in doing the Teaching Portfolio.

1. The Philosophy statement is central to creating a Teaching Portfolio. The Philosophy statement reflects the beliefs of the teacher and highlights those beliefs that are central to his/her teaching effectiveness. The remainder of the Portfolio is supporting data to summarize and offer as an example those highlights outlined in the Philosophy statement.

2. The Philosophy statement is a changing piece that should reflect the evolving teacher. Though I was unsure and uncomfortable with the process of developing a Teaching Philosophy statement, none the less I found myself reflecting deeper and evolving my own Philosophy during this year.
3. The Portfolio should reflect professionalism as a teacher. I finally realized that it is not the amount of information stuffed into a Portfolio that reflects professionalism. It is the quality and presentation of the material in the Portfolio that are representative of the teacher's standards. Basically it demonstrates that what I expect in quality from a student should be the same quality expectation that I expect from myself.
4. The Portfolio should reflect my responsibility and accountability to the course and to the student and ultimately to the College itself. The Portfolio should include summaries and examples of course expectations and assessment that demonstrate that the expectations are being met.
5. The Portfolio should also reflect my creativity within the classroom and course. This was done through the summaries, the class assignment sheet, the weekly newsletter and through the class assessments.
6. The Portfolio should be a tool that generates logical and lively discussion among peers. I feel that the process of developing this Portfolio definitely led to lively discussion of how to develop a Portfolio and the purpose for developing a Portfolio. The support by peers was tremendous, but at times it also became distracting.
7. The Portfolio should be a team evaluative piece that includes the advice and consultation of several mentors. While many of my peers meant well, it was nice to have two mentors who know my style of teaching and assisted me in highlighting that style on paper. The professional feedback has been invaluable by allowing me to evolve as a teacher without a lot of misdirection and uncertainty.
8. The Portfolio should be my own. Despite all the valuable feedback, ultimately it becomes my decision as to the direction of the Portfolio. It represents me!

The Portfolio will continue to evolve and change as I grow in my field and gain valuable insights as well as many new strategies.

My Philosophy:

As an educator in the Occupational Therapy Assistant Program at New Hampshire Community Technical College, at Claremont, I hold central to my teaching philosophy that I can influence human potential. To influence the human potential, an educator must involve the student in a way that will challenge the student and influence the way in which that student learns. To prepare a student for potential growth, educators must teach students how to seek out solutions to course-related problems in a resourceful way. A student who is not challenged will lack the necessary ingredients (self-direction, diligence and reflection) that allow for success in an educational environment. Education is hard work that requires a discipline of commitment from both the educator and the learner. Education is more than learning facts, skill practice and rigorous testing; it is also about development of an individual to reach his/her full potential, creating an environment where both the student and educator feel the bond of shared successes.

In order to create an environment of success, effective teaching practice must include:

1. A course outline and syllabus that act as a map for course direction. The outline identifies to the student my course objectives and expectations. The syllabus identifies the competencies I expect the student to achieve. By listing out my expectations I can emphasize the necessity of diligence and preparation in order to master the skills and acquire the knowledge necessary to succeed in Occupational Therapy.
2. A daily lesson plan that allows for a variety of teaching methods. I believe that throughout the duration of a class, the student will learn the presented information best if given in variety of ways. If I am to expect students to make a commitment to learning, then I believe I must present the course material in ways (lecture, hands on, role play in small groups, and discussion) that allow for an understanding of the presented material. I also believe that if I make effective use of time and resources in the class then the student will obtain the maximum benefit of my instruction.
3. Classroom assessment tools that provide feedback as to the student's level of understanding of presented material. By using the assessment tools (1 minute papers that highlight presented material learned today, a muddiest point paper that reflects misunderstood material)

I am able to determine how well I communicated the material to the student. I can also see how a student interpreted that information. If I am to create successes in the classroom, then I must be aware of the student's ability to understand the material and the student's ability to reflect back on what was learned.

4. A variety of evaluating tools (multiple choice tests, essays, short answer and case studies) to assess the student's level of learned knowledge in a course and the practical application of that knowledge to given course competencies. I believe that a student's success in learning can be influenced and measured by his/her ability to recognize and define problems and then to implement solutions.
5. Student advising regarding learning strategies in the classroom, self-assessment and self correction techniques. I believe that the key to any success lies in extrinsic (grades, verbal praise, feedback on papers) and intrinsic incentives that are meaningful only to the individual. I believe that it is essential to a student's success that he/she be able to recognize his/her incentive strategies. By advising students I am able to assist each student to recognize his/her incentives and to advise them as to the best way to utilize those incentives as learning strategies.
6. My own professional behavior in and out of the classroom. I believe that any success must first be role modeled, both in professional knowledge and performance as well as behavior. I hold high my ability to be clear, organized and self-directed. I also believe that it is important to be empathetic, compassionate yet able to assist a student in being held accountable for his/her own actions and outcomes. As a representative of the profession of Occupational Therapy I believe that my conduct in the educational system (in and out of the classroom) can have a positive outcome in the way a student will interrelate with clients in the future.

In conclusion, I believe that in teaching I can influence a student's potential not only to become proficient in the technical skills of the field, but also to think logically, to communicate effectively, to self direct and to self-assess and to self correct. By obtaining these skills, both the student and I have made that commitment to learning and ultimately, influencing human potential.

FROM THE WORLD OF BECOMING INTO THAT OF BEING: A WAY OF LEARNING

Paul Marashio

"Learning should not only take us somewhere; it should allow us later to go further more easily."

Jerome Bruner

Jerome Bruner's "The Process of Education" is the cornerstone upon which I built my teaching. Bruner stripped away the academic discipline's content to the discipline's basic structural core which tells us how the scholar works, thinks, and learns. For Bruner the act of learning contains a triad; acquisition, transformation, and evaluation. According to Bruner, initially the student acquires information/evidence. Then the student transforms this evidence by intuitively playing with the evidence, making guesses or hunches. Finally, the student evaluates the evidence, the hunches, to formulate generalizations or theses. Since this is the way the scholar - historian, scientist, engineer, writer, social-scientist, etc. - learns, why not bring this act of learning via a learning model into the classroom to teach the students to learn how to learn.

The Learning Model: A Way of Learning

Since I began teaching humanities several years ago, I fined tuned the original history process model to make it more compatible with humanities. Even though the basic elements of the original model are still in place, this time around I titled it the learning/teaching process model because when the students are actively engaged with this process they are transformed into both learner and teacher. While the students are busy collecting evidence from witnesses, sources, documents, to solve a stated problem, they are learners. During this phase of the process they act as prosecutors who constantly verify the data through cross referencing, backtracking, and cross examining the witnesses. It is during this collecting phase students become aware of their frame of reference, a.k.a. cultural bias - which I will define as the lifetime accumulation of cultural and environmental influences that shapes a person's world view. With the student's awareness of the presence of this subjective component, they are more apt to vigilantly guard against the possible intrusion of subjectivity upon their academic integrity.

In the internalization phase, when the students review the evidence in search of insights, connections, and patterns that lead to the formulation of inferences, they are teachers.

By seeing connections - that is, the logical sequence - students become aware of the patterns, those preliminary commonalties, designs that are embroidered into a tapestry or spun into a web. From those connections and patterns students develop inferences. That is they play in the world of hunches where intuition and premonition are highly active and where students spawn intelligent guesses. Then they head into an incubation period where they internalize the evidence and the inferences, giving additional time for reflection and thought with the outcome of hatching generalizations. Throughout this internalization phase the student is constructing, deconstructing, and reconstructing the evidence.

In the formulation phase the students are ready to formulate the generalization, thesis, viewpoint, or position. As the students travel through the learning/teaching process model, they are prosecutors, judges, and jury. As prosecutors they collect the evidence and ask the hard questions for verification. As judges they study the evidence to make connections, patterns, and render judgments on the inferences. As jurors they render an impartial verdict. It is in this final phase the students become both learner and teacher.

Once the students have completed the learning/teaching process model they share their discoveries with the ultimate jury - their peers.

The Learner as Detective

Prior to any explanation of the process model, the students are given the following handout:

When a solitary, independent learner detective is called to investigate a complex problem, the learner detective travels through a dangerous and chaotic world meeting with eyewitnesses. To assess the credibility of the accounts of the eyewitnesses, the learner detective must ask the refraining question, "How do I know this is true?" With a nimble use of inductive and deductive reasoning, the learner detective overcomes the perilous ordeals of gauging the eyewitnesses' bias and assessing the evidence. Once the learner detective, after an exhaustive research, identifies the significant evidence, then a judgment is rendered. While on this journey, the learner detective is prosecutor, judge, and jury. From this quest, justice is served, truth is revealed, and order is restored.

You are the learner as detective, investigating a perplexing problem, searching for a solution. Like the detective using an investigative process to divulge the truth, you also will scrupulously follow each step in the Learning/Teaching Process Model to conduct your investigation.

The Learning/Teaching Process Model

Prosecutor

Step 1: Statement of the Problem

Step 2: Study and Preparation: Review of the Evidence

Step 3: Collection of Evidence

- list the evidence
- evaluate the evidence
- select , arrange, and categorize the evidence

Optional: retrace your steps

Judge

Step 4: Internalization of the Evidence

- gather insights
- make connections
- make inferences
- construct and reconstruct the evidence

Step 5: Incubation of the Evidence

Optional: retrace your steps

Jury

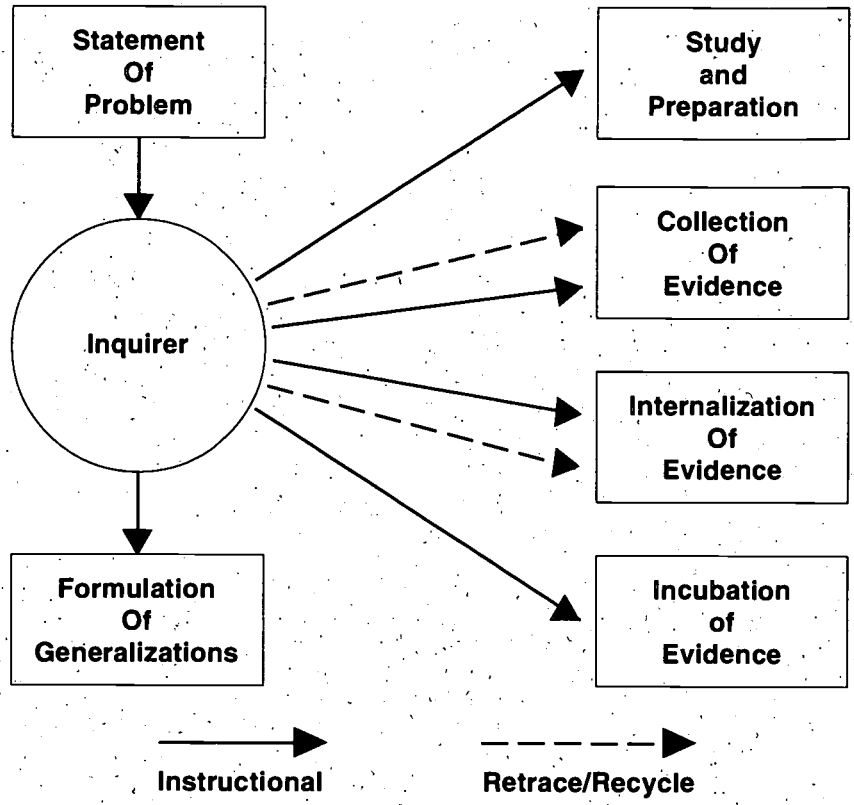
Step 6: Formulation of the Thesis and Generalization

- explaining and supporting the thesis and generalization
- verifying the thesis/generalization

Step 7: "Ah ha": Illumination

Step 8: Sharing the Insights

The Learning/Teaching Process Model



Such an analytical framework engages students in higher-level thinking skills. Thereupon, students are challenged by the learning process to operate simultaneously within several cognitive levels, breathing life into a mass of lifeless facts. This way of learning has greater staying power than the simple rote of information which quickly evaporates exponentially as time goes by.

An Allegory: Introducing the Act of Learning

Inside a dark cave several prisoners serving life sentences since birth are chained to chairs. Since they are immobilized, all they know of the world are the shadows they see on the cave's interior wall. They know nothing of the lighted lantern nor the shadow makers situated behind

them. An individual standing off to the side of the prisoners strolls over to remove the shackles from one of the prisoners and leads the captive to the light outside the cave. During this painfully arduous trip, the daunted prisoner absorbs new sites - the harsh light from the lantern, the shadowmakers roaming freely, the cave structure, and finally the blinding light of the sun, and once adjusted to the bright light, the world beyond the cave. On this journey the prisoner assimilates and processes the information and formulates generalizations about this brave new world. Thus, the prisoner discovers illumination.

Plato's "Allegory of the Cave" serves as a wonderful introductory metaphor for the learner's quest for knowledge through the use of a learning process that leads the inquiring student to the understanding of truth with a small t.

Oedipus, The Sleuth, Models Learning

Oedipus Rex becomes a detective in search of the killer of King Laius, Oedipus's Father, in order to save Thebes from a devastating plague. However, unbeknownst to him, Oedipus is in search of self. During this murder investigation Oedipus summons several eyewitnesses to gather the essential evidence to find the killer. Even though Oedipus's frame of reference - bias and denial - influences his investigation, each eyewitness leaves behind enough tantalizing information to compel him to pursue additional testimony to fill in the gaps in the murder case. As Oedipus questions each eyewitness, he seeks verification of their testimony by cross checking each eyewitness, eliminating irrelevant and uncorroborated evidence. Once he internalizes the evidence, Oedipus uncovers that he committed regicide, patricide and incest. Disgraced by these revelations he administers a harsh verdict - self inflicted blindness and a self-imposed exile from the City State of Thebes. As Oedipus progressed through each phase of the investigative process he acted as a hard boiled prosecutor, a tough judge, and a no-non-sense jury.

Prior to our discussion of Oedipus, I remind the students that like Oedipus we are also detectives on an exploratory expedition to discover information leading us to illumination.

Practicing the Process Model

A mock trial, "The People v Satan", is the first hands-on activity interlocking the students with the learning/teaching process model. The seminar is divided into two legal teams - the defense and the prosecution -

determined by the "cup of fate". Each legal team has a series of witnesses who will offer testimony either in defense of or in condemnation of Satan. The source for all the evidence for the trial is The Book of Job.

Satan is charged with murder, assault and battery, and destruction of property by the prosecution. Since all the evidence is circumstantial, the students must dig deeply into the source material to construct their respective cases.

The trial convenes with a series of opening statements from the attorneys. Then each side presents its case through its witnesses, with the opposition given equal opportunity to cross examine the witnesses. During this testimony phase of the trial each side is constructing, deconstructing and reconstructing the evidence, and establishing the witnesses' credibility. As the evidence mounts, the students' newly gained insights lead them to making connections, seeing patterns emerge, and developing inferences. As their cultural bias - frame of reference - gradually melts away, the defense's pretrial judgment of Satan's guilt dissolves. Challenged by the circumstantial evidence, both legal teams present impassioned closing statements alleging Satan's guilt or innocence.

It is during the jury phase of the trial, when the students, who are freed from their legal roles and obligations, discuss and debate the case on its merits so they can render a verdict. These deliberations lead students to the formulation of a verdict based upon the evidence presented by the several trial witnesses.

As you can observe from the above description of "The People v. Satan", this mock trial strongly reinforces the learning/teaching process model for the students. Throughout the trial the students come to both value and appreciate this process model. They recognize and understand the importance of evidence. Also, since an overwhelming majority of the students came to the trial convinced beyond a reasonable doubt of Satan's guilt, by the end of the trial the students were aware first hand of the powerful influence of their frame of reference. For me this was one of the most significant learnings in the trial.

Beyond this learning, the students learned how to effectively implement the learning/teaching process model. As a result, they learned how to gather evidence, how to verify that evidence, how to eliminate irrelevant evidence, how to construct, deconstruct and reconstruct evidence to make connections, patterns and inferences and finally, how to formulate a generalization.

Reinforcing the Learning/Teaching Process Model

Another learning strategy I use to further reinforce this process model is "Meeting of Minds: Confrontation". This learning strategy is loosely based on Steve Allen's PBS program of the same name. Upon completing a reading and viewing of Shakespeare's play, "The Tempest", several students select characters to role play and are assigned to thoroughly study those characters. Three interrogators are also selected to verify and validate the character's presentations by asking probing questions. An Emcee is chosen to open the show, to introduce the characters, and to facilitate the proceedings. As the program unfolds with each character presenting details about themselves and relationships with others in the play, the students come to a better comprehension of each character and thus a better knowledge of the play. "The Meeting of Minds" thoroughly prepares the seminar for the debriefing of "The Tempest" and offers to the students a greater opportunity to widely explore Shakespeare's thinking and ideas.

There are many learning strategies an instructor can bring into the classroom to ensure a constant use and reinforcement of the process model. This process model must be continuously reinforced if the process is to become second nature to the students. The purpose behind teaching the process model is to offer our students a learning instrument they can take with them when they leave us, and to guarantee they have a mechanism that leads them to becoming life long learners.

Evaluating the Learning Process Model

Along with the weekly short writing assignments, a take home final exam is also used as an evaluation component to measure the students' successful application of the process. A crisis scenario demanding a resolution is the structure on which the final is built. To successfully accomplish this task the students must apply the learning/teaching process model. All the necessary and usual informants are rounded up for the students - the scientists, philosophers, writers, poets and artists studied during the semester. The students are given a series of didactic questions to guide them in their gathering evidence. As the evidence accumulates, the student investigators churn the evidence over in their minds, constructing, deconstructing, and reconstructing to uncover insights, connections, patterns, and develop inferences. Once this internalization is completed, the student investigator is prepared for the formulation of a generalization, thesis or point of view. Finally, the student investigator's written report embroiders the material into a tightly woven tapestry.

Through this evaluation, the instructor and the students learn how successfully the students implemented and integrated the process model into their thought processes.

Student As Learner and Teacher

In Plato's "The Allegory of the Cave" Socrates instructs Glaucon on this essential insight on the way of learning;

> ...but then, if I am right, certain professors of education must be wrong when they say they can put knowledge into the soul which was not there before, like sight into blind eyes...whereas, our argument shows that the power and capacity of learning exists in the soul already; and that just as the eye was unable to turn from darkness to light without the whole body, so too the instrument of knowledge can only by the movement of the whole soul be turned from the world of becoming into that of being...

Both Plato and Socrates challenged the long held belief of professors that students enter their classes as empty receptacles anxiously awaiting the professor to fill them with knowledge. Such a belief negates the students' ability to learn. Plato's and Socrates' philosophy of pedagogy empower students to teach themselves and to seize responsibility for their learning. The Learning/Teaching Process Model subsidizes this empowerment, assisting the student on a learning quest with a facilitating instructor guiding the student out of the darkness of the cave toward the light.

Articulation Plan Between Physical Therapist Assistant and Physical Therapy Programs

Laurie Clute

The Physical Therapist Assistant (PTA) program at NHCTC-Claremont is currently in its twenty-second year. With a new Physical Therapy (PT) program beginning at Notre Dame College in Manchester, now is an ideal time to formulate an articulation plan between the two programs.

The majority of PTA students come back to school for a better-paying, more stable job. Most are in their late twenties or early thirties. Maybe half are parents. Most choose the PTA program because they want to become Physical Therapist Assistants. Some choose the PTA program because it is just too expensive to go to a four year college; there are usually three to four students in each incoming class who plan to begin their education in the PTA program, but who really want to be Physical Therapists. They hope to work as PTAs in a facility with good educational benefits allowing them to continue on to a PT program. These students are sorely discouraged by the seemingly callous treatment they receive when they talk to PT program faculty and admissions departments about transfer options. Some programs prefer not to take transfer students. For those programs that do, being licensed as a PTA may not be much of an advantage over other well-qualified transfer applicants. Additionally, the PTA student/graduate may be surprised at the few courses that will transfer to the PT program.

There are solutions to the transfer dilemma, though. On a national level, the newly formed National Assembly of Physical Therapist Assistants of the American Physical Therapy Association (APTA) should adopt transferability from PTA to PT programs as one of its focuses. In conjunction with the APTA's Section on Education, Department of Education and the Commission of Accreditation of Physical Therapy Education, the Assembly could conduct surveys of the educational programs to see what percentage of PTA graduates eventually enroll and graduate from PT programs. Certain schools would most likely be identified as "PTA-transfer-friendly", and their approach might be the model for other schools.

Secondly, on a national, state or regional level, workshops should be held between PTA and PT faculty. The focus of the workshops should

be on identification of admission and curriculum requirements for the PT programs. Assessment of course content and objectives of both the PT and PTA program courses will reveal similarities and differences. Ones with similar content and objectives (introduction to the profession, math, social sciences, or human development, for example) should transfer without difficulty. PTAs may also be allowed to "test out" of certain PT course objectives. Professional courses that entail more theory, evaluation and diagnostics certainly would need to be taken at the PT program, though the PTA graduate would have a solid foundation from their prior education.

During these workshops, the PTA faculty can also promote the concept of using the licensed PTA transfer student as a workstudy student in the lab setting. The PTA's knowledge of body mechanics, transferring and guarding patients during ambulation training, professional behavior, and use of the physical agents and exercise in Physical Therapy can be tapped during lab sessions. The PTA transfer student can assist the PT professor in answering students' questions and monitoring safe use of equipment. The end result is an efficient learning environment for all students.

As another solution to the transfer dilemma, the PTA faculty should encourage broader choices in the general education component of the PTA curriculum. We should be identifying those general education courses that are required for admission to PT programs (Physics, Chemistry, Statistics, Calculus, for example). We could recommend these courses at our two year colleges. Students interested in continuing their education would be advised to take these optional courses instead of currently required, but not transferable, courses.

The final piece of the solution to the transfer dilemma is to better advise the potential PTA applicant/student. During the admissions process, the applicant's future plans should be discussed with an eye toward the reality of the current situation. Students might be better advised to apply directly to a PT program rather than spend two years in a PTA program, then transfer into a PT program, where they will most likely begin as first semester sophomores and still have three or more years remaining in their education.

Though the focus of this article is on transferability between PTA and PT programs, the concept is applicable to other careers with different levels of educational requirements for the paraprofessional and the pro-

fessional. There will always be the student whose long range plan is to attain the professional degree, but who needs to take incremental steps for personal, financial or family reasons. The paraprofessional degree curriculum at the community technical college level can (and should) help prepare the student for that transition.

The transfer should be a seamless process that begins with the potential student in mind. The goal should be to encourage, not discourage, career mobility. Communication and planning at the national and local levels are the key elements in the process, with the national professional association encouraging the overall concept of easier career mobility, and the local faculty and programs devising the specific options.

GENERAL EDUCATION BALANCES

Nancy Marashio

Instead of serving as a flash point for conflicting needs, General Education at Claremont has been working to become an anchor where all crafts connect.

Our Technical and Business departments have clear connection to the Technical side of our mission, our Nursing and Allied Health/Human Services departments respond to their identification as centers of excellence, and our Instructional Services department was instituted in response to identified college needs. General Education meets its own responsibilities to mission by reaching out widely to all others yet reaching deeply into the requirements of its own disciplines of mathematics, sciences, English, humanities and social sciences.

As far back as 1978 General Education Department function related academic activities to life experiences; personal, social, and intellectual growth; exposure outside the context of specific programs; and broad cultural context and interdisciplinary academic activities. Presently, General Education is an academic arena where all degree students share a common experience, where students from programs mix, where an identified range of pedagogical approaches is assured, where degree as opposed to program requirements can be ascertained. General Education outcomes remain congruent with the following outcomes for our regional community technical college:

- prepare students to continue their education
- provide for continued educational opportunity and success
- assist students in successfully attaining their educational goals
- meet the needs of business and industry
- provide a strong academic foundation
- develop academic skills needed to succeed in the world of work, in two and four year degree programs, and in life
- develop self-confidence and direction
- respond to expressed desire to transfer in past and current students
- respond to advice of focus group and individuals from education, business and industry

In 1991 Claremont's Department Chairs identified the need to plan for establishment of college-wide graduate expectations, that is, universals that we'd like ALL graduates to be able to perform. The expecta-

tion was that degree requirements would be tailored to these universal outcomes. (DC Minutes, September 12, 1991) Faculty, working by departments, developed lists, and chairs combined those lists into college expectations for both General Education and programs.

In April 1992 President Reed affirmed that "nationally and here General Education competencies are what we're becoming more concerned with."

According to a November 1993 Dean Mills memo, the General Education set of requirements for degrees had been "established at the time the calendar changed from a quarter to a semester format. The requirements represented the answer to the question of WHAT DID WE WANT EACH GRADUATE TO HAVE UPON GRADUATION... it did allow the College to determine some common requirements and distribution of credits based on some principle and philosophic base. It is also important to note that these requirements were drafted essentially by faculty, not Deans or Presidents." In 1993, after reevaluating the needs and philosophy of the General Education core, the college reaffirmed the General Education core not as "service" but as valuable in itself. Each department set up not a programmatic but a student needs list; each department discussed the General Education document, "Articulation of the Core". Instead of diluting General Education in order to maintain the high number of program credits, all looked at core General Education courses, at program required General Education courses, and at elective General Education courses to find a balance between decentralized academic decision making at the department level and larger needs at the level of the whole college.

Claremont affirmed the System expectation that every associate degree program has a major consisting of a minimum of 32 credits in specialty courses, and a general education core, consisting of courses that are drawn from mathematics, sciences, English, and the humanities. These courses are essential elements in the achievement of identified competencies, are not directed toward specialized study or specific occupational or professional objectives, and fall with the System's required five general areas as follows:

a. Communication or Literature or both;
b. Social Science;
c. Humanities and Fine Arts;
d. Business; and
e. Mathematics and Science

A variety of forces assisted General Education in reassessing courses, pedagogy, faculty, and department implementation of what it was accountable for doing.

The system instituted an initiative to articulate a range of competencies, both core and program; core was to be the "essential elements in the achievement of identified competencies and...not directed toward specialized strictly or specific occupational or professional objectives." Though General Education was not responsible alone for those competencies, alignment of General Education disciplines across the System became an imperative and added a broader pool of General Education expertise to assessment of course content and needs. Transfer questions led to an initiative for a one-year General Education program to be developed. The System Pedagogy Committee made sharing and learning about various pedagogies an essential element of faculty development; Claremont General Education faculty published articles about their own classroom practices, seeking broad input to refine their approaches.

At the College level General Education evolved to having its own page in the catalog, to resolving academic questions such as: could a science course exist without a lab and still meet our outcomes. One valuable assessment came from the assignment in "Humanities in Western Culture" where students were asked to design their ideal for college education; specifically struggling with how to define an educated person, students across all programs reaffirmed the value of the Claremont General Education core as it existed, suggesting refinements but not wholesale changes.

In 1995 General Education again was in the spotlight as a program assessment process determined that Claremont programs were more typical of Associate of Science rather than Applied Associate of Science degrees. Since student transfer to four year colleges was more and more common and since the System was looking toward a mission that leaned toward community as well as technical college, Claremont asked if we should change several or all AAS degrees to AS. Two of the five criteria or characteristics Dean Mills asked us to assess were:

- The "General Education has breadth"; it is not tied simply to program outcome demands.
- The "breadth" of General Education courses makes them transferable to upper level programs as part of typical distribution requirements.

After quality of General Education courses was reaffirmed in the decision to change all AAS to AS, distribution needs within General Education needed revisiting.

As early as 1991 joint meetings of General Education with other departments had identified these ongoing responses:

NURSING DEPARTMENT

- The accrediting committee likes the close working relationship between our departments as well as our "strong sense of purpose".
- The humanities curriculum was also individually cited

ALLIED HEALTH DEPARTMENT

- "To fulfill the core General Education should not abandon what exists but broaden... offer more possibilities"
- "How do we keep the core commonalties yet have some choices for those people beyond the core"?
- question number of credits for Conduct of Science (2) and math (4)
- Tom noted core came from failure of a multiple choice system and need to "pick a chunk and DO it" – Joan responded, "we believe the core itself is a critical part... we just want to enhance."

BUSINESS DEPARTMENT

- Need for more general science courses
- Need for electives especially for part timers

TECHNICAL DEPARTMENT

- No concern with existing core

Improving the core yet offering more electives became possible after soul searching course assessments in relation to student needs and to System competencies. Given no more resources, General Education began to slowly create new courses rooted in the articulated and accepted outcomes, philosophy, function, goals, and competencies.

The Claremont campus developed a full fledged diploma program proposal for a one year General Education Transfer, meeting all the expectations of the Claremont program proposal format and being approved in our formal campus approval process. Our proposal then became not only the first one approved for System implementation by the Commissioner but also a model in developing the System Associate of Arts Degree and accompanying Diploma of Arts. Claremont is now implementing the System model for both, bolstering with elements from

Claremont's original one year proposal. Development and implementation of a one-year diploma and then an Associate of Arts have reemphasized the commitment of the college to the general education side of learning and its role in successful fulfillment of mission.

Originally forced together as a department because we were the "not a program" pieces, General Education faculty have worked to become a coherent and balanced whole. In our two year college world we had been seen to exist in order to meet accrediting requirements or to pave the way for program competencies. Course by course we had always known we were more than that. Committed to our own disciplines with strong expertise, each GE faculty member knew how our own classes broke through to depths of understanding.

Requested to articulate what it was doing as the general education component the department had struggled to illumine not its differences but its likenesses. Though each of us was fostered in a liberal arts environment, our disciplines of mathematics, biological and physical sciences, english, hummanities, and social science demand – at least on the surface – facts, information, concepts, insights, processes and reflections of quite different kinds. Math to an English professor can seem cut and dried, while writing to a math professor can seem without clear choices; Science to a humanities professor can seem lost in lab steps while humanities to a science professor can seem a hash of readings and films. Students are the ones who led faculty to see deeper into each other's disciplines. We heard what excited students said about each other's classes. They compared the humanities path from dark cave to outer illumination with confidence in a composition draft critiqued supportively in English. The frustration of finding their way to answers in Conduct of Science they likened to discovering the connections in Statistics. Student questions and connections bubble up connections across the department.

Students are the ones who convince us that we are on the best track. It is their successes that determine ours. Initiated into the worlds of mathematics, sciences, English, humanities and social sciences, students discover the challenges, the endurance, the joys of confident learners. They don't do this without frustration; it is the student who railed against the obscurity of Conduct of Science who is also the student who in Conduct found the courage to move beyond safe concrete learning to abstraction. Listening to the frustration and working with it – not covering it or disappearing it – is what leads to the depths of general education learning.

Opening the self to other views in a give and take is the essential. Looking for next steps is what causes their creation. Moving forward, President Jordan's goal, is a way to come together.

Our struggle now is to align Claremont's General Education Department with Nashua's Arts and Sciences Department. At the October 15, 1996 Academic Management symposium, "the need to develop 'consistency' in developing a unified vision for General Education on the two campuses whether a common terminology was employed or not" was identified. Considerable time has been devoted to talking about and sharing what exists on each campus. Identification of the agreed upon need to consider "a cluster of course choices which preserves the 'core' concept development by Claremont faculty members while extending it to address the needs of specific program requirements on the Nashua campus" was one step. Commitment to the methodologies and to the thinking of the mathematician, the scientist, the writer, the humanist, and the social scientist crosses both campuses. Our work continues.

At this moment in our evolution as a department we may appear arrogant in our commitment to what we do together, but in fact we have a sureness of purpose and direction that is far from arrogant. Searchers all, we probe for next steps, for integration change, for swapping pedagogies, for recognizing mistakes, for seeing what doesn't work so we can improve, for supporting "AHA" moments. We are doing these together because we have learned the similarities in our breakthroughs and frustrations.

How did we reach these insights?

- putting issues on the table
- talking long enough to get others to see our vantage points
- writing and rewriting course objectives
- assessing each other's course writings
- trying to understand each other well enough to become advocates to students for each other's courses
- looking for/fumbling toward reasons for a core
- testing, rejecting, shaping a core
- modifying as a result of input
- understanding the conflicting and corresponding needs of General Education programs
- not overstepping our credit bounds
- supporting each other's strengths
- understanding why – by seeing impacts in our own courses – courses connect with and nurture each other

Reinforcement from outside helps. Accreditors of programs, administrators, students with experience at other colleges, fellow participants in discipline conferences force us to reflect and help us to acknowledge strengths and needs of what we do. Just as the devil is in the details, so are the teachable moments. Tom Gorka sees how a tiny change in wording or timing determines student's science understanding, Dick Conway builds in time for humanities students to question. Diana Wyman shares science lecture outlines so students can get beyond the notes. Each step forward improves not only the learning but also the teaching, the course, the department, and general education – for each step is shared.

Bound to program crafts, to our own disciplines, to each other, General Education works to balance freedoms and responsibilities, anchoring high schools and four year colleges all our common domains within the ongoing stresses of change, trying (like Frost's birches) to bend without breaking.

SLOW DOWN, MR. EDDY, PUH-LEEZE: DISORDERLY TEACHING (WITH AN ATTENTION DEFICIT)

Greg Eddy

My mother repeatedly exclaimed, "You're not listening to me." Teachers wrote comments on my report cards like "doesn't work up to potential" and "unmotivated" and told my parents that "he'll grow out of it." My wife suspected that I didn't love her, as physical intimacy sometimes makes my skin crawl. The psychologist diagnosed me at age 41 with "attention deficit disorder, inattention type."

I started teaching for two main reasons: I wanted to be a "catcher in the rye" who would save the innocent from a world of incompetence and hypocrisy, and (I later came to realize), I had a captive audience who would actually pay me to hear me talk to myself, all in the name of "education."

The audience revolted. I became their most recent incompetent, effusing hypocrisy as a high school social studies teacher carping about justice and fairness, while limiting their learning with my impulsivity and inattention. Finally, in one of those defining moments of a lifetime, a student exasperatedly pled "Slow down, Mr. Eddy, puh-leeze." And I did. For a while.

People with an attention deficit disorder exhibit three major symptoms: inattention, impulsivity, and hyperactivity.[1] As a teacher, inattention contributes to my tendencies towards less-than-adequate lesson planning, late grading of student assignments, and reluctance to take responsibility for boring, but essential, aspects of the job (like administrative recordkeeping): things "fall through the cracks." Impulsivity impels me to take off on a verbal tangent at the drop of a hat at speeds incomprehensible to mere mortals ("slow down, Mr. Eddy, puh-leeze"). Although my diagnostician claims I'm one of those adults who grew out of hyperactivity, it's still apparent when my pencil or foot starts involuntarily tapping like a woodpecker's beak when I'm considering new, exciting ideas.

As a teacher with an attention deficit, I bring certain gifts to my students, but I must also shelter those gifts from the fierce winds of my

[1] I'm using the expression "attention deficit disorder" (ADD) as a generic term for attention deficit hyperactivity disorder (ADHD). Diagnosticians distinguish between ADD, inattentive type and ADD, with hyperactivity.

differences. Students commend my enthusiasm, compassion, and energy; students condemn my seeming self-centeredness, indifference, and rudeness. To protect the gifts I bring to my students, I must erect shelters from the storms of disorder. I have ADD (according to the psychologists, psychiatrists, and lawyers), but I also am AIDE (as I conceive myself). I am Attentionally Intensified, Diversified, and Enhanced, and this gift helps make me the unique teacher that I am. I want students to recognize me as a teacher who can point them in new directions, with compassion and caring, and who will not let them quit on themselves.

I must make especial efforts to plan out my lessons in detail; I know that if I do not do this, I will be cheating my students when I overlook an important point or fail to make an important connection clear to them. However, I've gradually learned to make sure that lesson plans include both the expected "coverage" of the subject matter, as well as a balance of opportunities for students to experience the gales of imagination and creativity always waiting to break.

I must monitor my speed and manner of presentation; while I'm most comfortable talking a mile-a-minute, most students don't process as fast as I speak and most students don't react favorably when I express my frustration with them. Even veiled sarcasm is hurtful to them, as it was to me ("unmotivated").

I must plan and use my time wisely, so that I can live the full life that my students expect of me and for themselves; to attain the wisdom of experience to bring into class, I must take care that I cultivate wisdom through living a life of moderation in all things.

Yet no matter what I do, I know that things will still sometimes "fall through the cracks." It's ironic that what I feel most towards my students and bring to my teaching, compassion and caring, is what my impulsivity and inattention limits, in practice. I know I care, but I sometimes don't seem to show it to my students, and I can't physiologically help myself!

But serendipitously, this very irony helps make me an even better teacher. Because I have such deep personal experience with the incongruities and paradoxes of the human experience because of my "disorder," I believe I can better teach Humanities. **I believe that sharing my struggles to be patient in the face of my impulsivity and inattention can help students better understand how we all struggle with our "human experience."** Because I have struggled with my own studies because of my impulses to run out of the room and do *anything* else and

the inattention that causes me to reread the same paragraph five times without understanding it, I believe I can better teach Active Reading and Critical Thinking. Because I know what it's like to be discriminated against solely because of my disability ("doesn't work up to potential"), I believe I, as a Disabilities Coordinator, can better help the College and the society it serves.

Of course, all teachers have deep personal experience of the incongruities and paradoxes of the human experience because of their own differences. Differences help make us the teachers we are. Our differences make us most real and valuable to our students. The new and the different is what they seek and what they need from us as their teachers.

So, if you haven't already while reading this, take a few moments to think about what differences help make you the teacher you are. What "disorder" do you bring to the world that makes your class worth attending? How would that student of yours fill in the blanks?

"_____, Mr./Mrs./Ms. _____, puh-leeze!"

ADVISING STUDENTS TOWARD RESPONSIBLE BEHAVIOR

Joan Holcombe Larsen

Meet My Student, Tim.

Tim stalked into my office with an aggressive, heated step. Muscles were taut. Eyes darted with a mixture of guilt, anger and frustration. I knew he was ready with his barricade of excuses for class absences, paper tardiness and one missed test. I sat calmly, telling myself not to blurt my disapproval .

"Tim", I inquired, "What seems to be going on for you?"

Tim began his list. "My boss at work... My landlord... My parole officer..."

"Tim, you sound like you are feeling out of control. Are you?"

I waited for his answer. I listened to his words and tone. I froze my tongue, resisting the temptation to tell him his sins .

"Would you like to feel back in control?" I asked, attempting to disarm his defenses.

"Well, yah," he muttered, "of course." His darting eyes seemed to slow, with just a bit of sustained eye contact, searching perhaps for my hook. Or waiting for my confrontation. I offered none either.

I asked again calmly, refocusing on our academic issues, "You seem to have problems with this class. What do you want for the class? To finish? To Pass?"

"I don't want to fail it," he whispered.

"Great, That is a start. What **do** you want?"

"Passing is what I want, but how can I when I am so far behind?"

"Well," I offered, " let's look at the options. Do you want to "just get by" or do you want to really do well and be able to understand and use the information?"

"I guess I really want to use it. I spent a lot of time waiting for this chance, to be in the program. This is it: my chance to get a new start. I want to do more than just get by!"

My first concern was answered. I still had a student who wanted to commit. My next hope was to guide him realistically toward choices which have a chance for success.

I offered to him, "Do you want to be a "really good" clinician or an "OK" one?"

"I want to be good!! I want to do well in college, in the program. And I think this is really what I want to do with my life. But I always blow it somewhere."

I urged him to paint a picture of success in school and in the field. I asked him,

> "What does your picture of a competent, successful student look like to you?"
> Is it the student going to class?
> Asking questions?
> Getting work done?
> Understanding and seeing the connections?
> Is it getting "A's" or "C's"?
> Is it seeing yourself working competently? Responsibly? Confidently?
> Are you, as the successful student or clinician, having fun?
> Are you connected with your colleagues? "

He described his pictures, some attainable, some long shots.

I helped him to describe where he wanted to be; to search for the behaviors which lead to reaching his goal.

"Tim, what are you doing *now* to reach that goal?"

Tim looked blankly, muttered some excuses or token efforts, even some genuine ones. I was asking him to take a real look at his own behavior and to the outcomes of his choices.

I posed, "Is missing classes, and tests and due-dates helping you to get what you want, to do well in the program, in the field?"

"No, not at all, But..."

"How much do you really want to succeed and to graduate, work in the field, be a competent clinician?"

"A lot! It is finally something I think I would be good at. But..."

I interjected. "Then can we talk about possible first steps toward that goal?" I waited for his confirmation. He nodded almost imperceptibly. As Tim evaluated his own behaviors in our conversation for the actions which were not effective in the class, he was a step closer (even if a very small step) toward choosing more effective, need-fulfilling behavior.

I pushed further. "Do you have ideas of how and where to begin?" I encouraged him to list them. Since he was in this pattern of failure and cycles of out-of-control behavior, he may not have experiences to draw from. He looked overwehlmed.

"Do you want to hear some of my ideas? " I asked for his permission to offer suggestions. This allowed him to be in control. If I *told* him, I knew I would lose him.

We talked about several options: continue to do what he is doing; hustle to catch up in the midst of life chaos; or drop the course and re-register next semester, which would give him time to save money, get his legal issues into place, pay his landlord and his bills. For Tim, the choice was clear. If success and competence were his wants and needs, then the last choice was the best: to drop the course and get his life in order, and begin again with supports and strategies in place. He could protect his dignity, his sense of self without one more failure.

We worked on a brief strategy and identified supports to help him organize his work, personal issues and academic issues. He left perhaps a bit more in control, with his own future still within reach.

* * * * *

What were the differences between this exchange and others we might have experienced with students in trouble?

- Tim immediately heard the faculty speak as an ally rather than an adversary or accuser.
- Tim had someone listening to him, offering him the opportunity to paint his picture of wants and explore the effectiveness of his own behavior.
- Tim was exploring options rather than following old patterns of behavior which have been so counter-productive in the past.
- And finally, Tim's next step belonged to him, not to administrators, faculty, parole officer, landlord, or others. He took control rather than letting "it" happen to him. He took responsibility for his behavior by processing his options, evaluating their effectiveness in meeting his needs, and choosing for himself how he will proceed. Being in control felt good . It was powerful.The plan was his alone.

The process, seemingly simple, calm and basic, is part of the theory and practice of Dr. William Glasser and his philosophy of "Choice Theory", formally called Control Theory. It is based upon the premise that all behavior, effective or ineffective, is chosen in an attempt to meet basic human needs. All behavior is purposeful.

Glasser describes these four basic psychological needs beyond survival, which drive all our behavior:

BASIC NEEDS DRIVEN ALL BEHAVIOR:

- the need to be powerful or effective, competent, confident
- the need to belong and love and be loved
- the need to make our own choices and have freedom in our daily lives
- the need to have pleasure and fun.

- **SURVIVAL**
- **POWER**
- **LOVE**
- **FREEDOM**
- **FUN**

According to Glasser and others in the field, we choose all behaviors, consciously or unconsciously, in our attempt to meet these human needs. When we recognize the inner control we have over all our behavior, we can choose more wisely to meet our needs.

Tim's choice to avoid classes was perhaps his way to avoid feeling out of control or **powerless** and incompetent. Or Tim may have needed to be **free** of conflicts, demands, or stress. Whatever his needs, his choices in behavior were not effective, resulting in his familiar spiral down toward failure.

As an instructor, where are my needs in all of this? I want and need to have committed, inner-motivated students who become competent and knowledgeable. I can better realize these needs and wants if both student and faculty are working toward a common end. In this approach, I rarely take on or solve my student's problems. I join the student in a partnership, a "team for success", and help the student to find solutions. I am not solving the student's problems or playing the role of tough boss, parent or conscience. I am merely a coach, a guide, an ally.

Glasser's techniques for counseling and problem solving rely on some basic premises:

1. People are basically good.
2. All behavior is purposeful
3. A person can learn a better way to meet his or her needs.
4. A person needs to and can make effective choices.
5. A person will not change his or her behavior if he or she does not perceive something in it for him or her.
6. By changing our own behavior we can change thinking and feeling.

7. An environment which focuses on and reinforces positive behavior will in the long run facilitate change more than one which focuses on negative behavior.

(Barnes D.Boffey, Ed.D,Intensive Week Training Packet, 1991)

Although counseling or problem solving in this model can ultimately be quite complex, a few simple components are always included. A first component is to join the student's team: **become a partner.** Convince the student you want to assist, not to argue or punish or flex muscle. Ask about the student's picture, his or her story, what the student sees as the problem. Avoid telling the problem other than stating the facts, realities or outcomes of specific choices. Letting Tim know that I was concerned because he was likely to fail the course with his absences and other choices, and asking him for his perspective relieved me of the role of adversary. I could be a partner to help him move on.

The second essential component **is discovering what the the student's real wants are**. Always return to those real wants when the student gets side-tracked or begins to bring up excuses, or to tell long histories. Tim really wanted some control of his collapsing world and to effectively direct the stresses . This is what Glasser calls need for inner "power" or effectiveness. Tim might also have wanted to be free of all the demands on him which he could not manage successfully. If I had confronted him with the usual, "Why are you always late?" or, "You are going to flunk my class..." he likely would have used, instead, his fight or flight behaviors. But, by going directly to his real wants, ("Do you want more control in your life, "or "Do you want to succeed in this program...") he could address the real issues.

Next, **ask the student to identify his or her own present behaviors.** What is he or she doing now to meet those wants and needs? I asked Tim what he was doing at the time to succeed at reaching his goal. I waited for him to list for me all his efforts. With the list before us on the table, I could then ask the critical next question, the **evaluating question**: "Is what you are doing working to get what you want ?" I could do the usual and *tell* him that missing classes, passing papers in late and not taking tests weren't working, but I wanted him to evaluate his own behavior out loud. I wanted him to say it and see it.

Once Tim could say that what he was doing was not working, then he was ready to **explore his options**. But he may not know his options.

So often people make choices in behavior because they do not think, do not know, or do what they have always done before. They may need guidance. But before you give the "right answer", ask permission to give some suggestions so that they are still in control. **Asking** Tim if he wanted to hear some of my ideas demonstrated to Tim that he still had power (the control) to choose.

When we have all the possibilities before us, including the best and worst, we eliminate each, one by one, hopefully coming to one or several actions to which he can commit and follow through. It is **the student's plan** taking shape. If it is the student's, he is more likely to **commit** and to succeed. If in fact he comes back days later unable to follow through, procrastinating, offering only "yes- but", then you know the plan was too great a leap, too big a step. At that juncture, planning must be revisited. Tim could not do the big hustle to get caught up. If he had opted for that choice, he likely would have failed yet again. I asked Tim if he were truly committed to finishing and if he truly felt this plan was going to work for him. He was determined to return and to finish.

Why is this approach to advising effective? Perhaps, it is because we are looking forward. We consider the needs of the individual of the present. We do not deny the past, but do not try to solve it. We help the student to discover new choices, new options, to deal with the conditions he has, and to choose effectively. It is the student who must choose to commit to change.

Components for Counseling

Listen to the story and state concern.
What do you want?
What are you doing now to get your wants?
Are present behaviors working to get real wants?
Explore options.
Make a plan.
Get a commitment to the plan.
Don't give up!

As faculty, most of us want our students to succeed . We want committed, hard-working, responsible students. They too want to succeed, to reach their goals, to finish with a sense of accomplishment with skills in their pocket. If we can work with our students to discover the choices of behavior they have to reach goals, they have a chance. Responsible behavior can indeed be theirs.

Tim returned a few weeks later. He thrust his strong muscular hand at me to shake. He looked at me with his determined gaze. He articulated in his emphatic voice that he will be back next term, ready to work. He thanked me for my counsel.

I did little really, but to help him take control and choose wisely for his own wants. I looked forward to a student who will likely be more ready and committed when he returns.

* * * * *

Epilogue: This is an actual case, with the name changed. Tim has since graduated and gone on to work very successfully in a psychiatric hospital out of state as a Certified Occupational therapy Assistant. He plans to earn his Bachelor in Science Degree in a few years time. Our discussion was only a beginning toward a successful future.

For more Information

Reality Therapy, Glasser, Wm., Harper/Collins, 1965.
What are You Doing?, Glasser, Naomi, Harper/Collins, 1980.
Control Theory ,Glasser, Wm., Harper/Collins, 1984.
Take Effective Control of Your Life, Glasser, Wm. Harper & Row, 1984.
In Pursuit of Happiness, Good, Perry, New View, 1987
Helping Kids Help Themselves, Good, Perry, New View, 1988.
Control Theory in the Classroom, Glasser, Wm, Harper/Collins, 1990
The Quality School: Managing Students without Coercion, Glasser, Wm., Harper/Collins, 1990.
Its OK to be the Boss, Good, Perry, New View,1990.
Quality School Teacher , Glasser, Wm., Harper/Collins, 1993.
Reinventing Yourself, Boffey, Barnes, New View, 1993.
New Paradigms for Quality, New View, Green, Brad ,1994.
Self-Control Spiral/Cycle Teaching Guide, Reaching Out, Greene, Janet, Laconia, NH.,1995.
Creating the Conditions, Gossen & Anderson, New View,1995.
America's Schools; Making Them Work, Rauhauser, McLennan, New View.

A LETTER FROM THE HEART

Nancy Roy and Susan Welsh

What Is The Teacher

What is the teacher?
A guide, not a guard

What is the learning?
A journey, not a destination

What is discovery?
Questioning the answers, not answering the questions

What is the process?
Discovering ideas, not covering content.

What is the goal?
Open minds, not closed issues

What is the test?
Being and becoming, not remembering and reviewing

What is the school?
Whatever we choose to make it

(Alan A. Glatthorn)

Dear Colleague,

How can we, as teachers, create a model that maximizes individual potential within the confines of a well-established bureaucracy? For more than two years now we have been experimenting with ways in which we can engage our souls in our work as educators at New Hampshire Community Technical College. We have a commitment to creating a working/learning environment that models the ability to embrace the uncertainty of the future as opportunity to discover passion. We are committed to the belief that our diversity is our strength.

We are writing to share with you the experiences we had at two different conferences that we attended. These were great demonstrations of synchronicity. Jung defines the *meaningful coincidence of two or more events, where something more than chance is involved* as synchronicity. Joseph Campbell calls these connections, these events, *a thousand helping hands*. Louis Pasteur states, *chance favors only the prepared mind*. The

experiences we had at these conferences appeared to be right on time for us and let us know that we are not alone with our passion for transforming our systems and structures to be supportive resources.

The first conference was a School To Work Conference in New Orleans, *the city of enchantment*. The conference was exciting and the city is full of new adventures. Our senses were fully engaged in the process of learning during this week. The mind has a wonderful way of bringing experience together of seeing connections when you let it! Kathleen Harris from Sonoma State University in California, had told us that teaming is the key... *When traveling on dangerous roads, hold hands and stay together*. Though New Orleans is full of wonder, there is also the potential for harm. Four of us that traveled as a "team" found safety in numbers as we ventured forth together some distance from our workplace. Would we be able to bring this sense of team back to our work ? In our daily work it may be harder to express our fears and reach for the supportive hand of a colleague. It is often difficult to create an atmosphere that accepts our fears and failures, not only celebrates success. Often success goes unrecognized in our fast-paced, task oriented environments.

Another New Orleans presenter, Alan November, a technology specialist and futurist, humbly shared his thoughts about "The End of the Job". Much of the audience applauded enthusiastically at the idea that principals would no longer be a part of the educational picture. The reality is that we are not sure of what the jobs of the next millenium will look like or require of us. A recent review of the New Hampshire Employment Security projections describing the job demands of the future suggest new jobs and combinations of existing jobs that pose a challenge for us all. But then, even these projections, are generated using the SWAG (Scientific Wild Ass Guess) method. How can we best prepare ourselves and our students to meet this uncertainty with confidence?

We do have evidence of some trends. Individuals will change careers many times during a lifetime. Content is becoming outdated at a very fast rate. Teachers and students must engage in the learning process together. Self esteem is interlaced with the ability to succeed. Our present educational system is based more on the fear of failure than on a sense of developing a unique purpose. With these thoughts in our minds, what will the future require of us?

It may well require...

That we know our own genius.

That we can summon and manage our energies.

That we can identify and attend to the things that grow what we love.

That we have the minds of artists and can interweave the threads of life in many ways to support the global tapestry of the earth.

That we have the courage to commit.

That we can dance with our demons.

How do we teach this?

A year later we attended the second conference entitled *Soul in the Workplace*, held at the Kripalu Center in Lenox, Mass. Again we fully engaged in the experience of learning and rearranging past learning. The pre-conference activity was facilitated by, Gwen Gordon, an environmentalist and consultant. Together we participated in a day long event that Gwen developed called the Big Picture Puzzle. Her personal dream is to help people reconnect with ecology. She believes we long to be divided no more and that we must find ourselves within the bigger picture puzzle. One of her comments was that *a group is only as healthy as how much difference it can hold*. The groups within our workplace came to mind related to this thought. Are we modeling for our students how to find one's unique contribution to the group? Are we modeling diversity as a source of unity and strength in meeting new challenges?

David Whyte is a poet who now takes his poetry to corporations. He believes that poetry speaks to everyone and can be a way for us to reconnect to the life within us. David Whyte uses his poetry to point out the significance of connecting our souls to our work. He believes that the systems and organizations will collapse on themselves if we do not retrieve this connection. We have common fears, hopes and dreams and we may be able to find nourishment in words as his poem suggests.

This is not
the age of information

This is *not*
the age of information

Forget the news,
and the radio
and the blurred screen.

This is a time
of loaves
and fishes.

people are hungry,
and one good word is bread
for a thousand.

Do we dare to support each other in bringing our souls to work with us? Do we dare share this unconventional model with our students? Do we dare?

BIBLIOGRAPHY

Hawken, Paul, *The Ecology of Commerce; Growing A Business; The Next Economy.*

Sinetar, Marsh, *Do What You Love, The Money Will Follow; Developing a 21st Century Mind.*

Whyte, David, *The Heart Aroused, Poetry and the Preservation of the Soul in Corporate America.*

For notes, handouts, and further information about *The Second Annual International Conference on Academic/Vocational Curriculum Integration with School-to-Work Transition, Authentic Assessment, Tech Prep, February 27-March 2, 1997* and the conference, *Expressing Your Soul in the Workplace, April 30-May 3, 1998,* contact Nancy Roy or Sue Welsh at NHCTC/Claremont.

HISTORY REPEATS ITSELF: PROCESS WRITING AND THE CLASSICAL TRIVIUM

Jane Whittington

When I began teaching Freshman Composition at NHCTC-Claremont a year ago, I quickly realized that the majority of my students needed instruction in the use of standard English. Students who achieved low or at-risk scores on the writing portion of the standardized ACT/Asset test were not the only ones who exhibited limited proficiency in the application of standard grammar; students whose scores fell into the average range, and even students who scored in the above-average range, lacked certain basic skills.

Unless I provided some grounding in specific rules of grammar and usage, it seemed to me that my students would not be able to produce work that communicated their ideas, feelings, and personal experiences effectively. Attempting to learn and apply the writing process without a working knowledge of how written language is organized, I reasoned, would surely be a set-up for failure, no matter how creative a student's ideas might be. It was also quite evident to me that, although they were not sure what they lacked, most students realized they were missing a key piece to the puzzle that is writing, and their sense of being deficient was a source of anxiety for them.

"My lack of self confidence was fueled by my insecurity about my grammatical prowess," one student wrote in her end-of-semester course reflection. "I knew that I could be visually descriptive but wondered if I could be technically proficient."

My observations of composition students at the Claremont campus, along with my broader knowledge derived from conducting research in writing assessment at Plymouth State College during the past year, indicate a general lack of facility with grammar and usage among students currently entering college, whether they arrive immediately after finishing high school or enroll years later as nontraditional students.

In fact, the United States Department of Education reports concurrent, widespread agreement among educators and employers that the writing skills of students and graduates are deteriorating (1993).

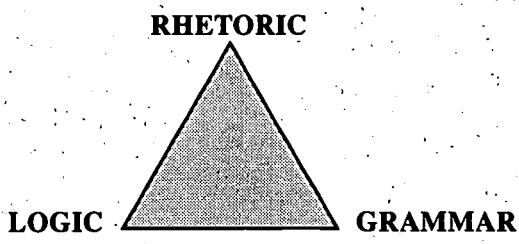
My observations, along with this assertion, have led me to evaluate what I mean when I speak about teaching college students to write. For me, such instruction should result in a list of competencies that includes creative presentation of an idea or experience, discernible structure, evidence of individual voice, and competent use of standard English, as demonstrated by grammatical sentences, appropriate use of punctuation, and lack of mechanical error. I address the elements of presentation, structure, and voice throughout the semester in my composition classes as key goals of effective writing. I encourage students to revise their work with these elements in mind, I encourage discussion of the elements during peer response to works-in-progress, and I provide many examples of work in which all three are demonstrated.

In my view, however, presentation, structure, and voice cannot emerge naturally in student work as long as the writer's facility with English grammar and usage is substandard. I address grammar as an element of the craft that is no less important than the others in the production of work that communicates ideas and experiences. I believe that grammar instruction should be formally incorporated into writing process pedagogy as an in-class component to be presented and processed in an interactive workshop setting.

This is hardly a new idea. The teaching of traditional grammar—defined as the set of categories, functions, and rules that teachers commonly employ to describe a sentence and its parts—as an academic subject of secondary importance to, and apart from, writing instruction is a relatively recent development, and the refusal to include grammar instruction in writing pedagogy has been described as a reaction against the prominence of grammatical concerns in early composition history (Wallace, 1995).

Ancient language arts pedagogy incorporated the notion that style lies between the creation of ideas and the delivery of those ideas. The Greeks

The Greek and Roman Language Arts Trivium



and Romans viewed grammar as organic to style, and for centuries grammar instruction occupied a place alongside the instruction of rhetoric and logic in the language arts trivium (Glenn, 1995).

Throughout the Renaissance, English language students were educated using a pedagogy based on classical Roman and Greek models of integrated language arts. Gaining expertise in grammar was believed to be operative in leading students forward by making them conscious of their developing skills and allowing them to apply those skills to their writing. In this sense, grammar and writing were considered to be sister arts (Glenn, 1995).

Beginning during the latter half of the eighteenth century, English grammar instruction was incorporated into the language arts curricula of American schools and colleges and was considered to be intrinsic to the improvement of writing. Composition instruction incorporated lessons in traditional grammar comprised of the parts of speech, the structure and functions of various syntactic constructions (e.g. phrases, clauses, and sentences), and guidance about accepted usage.

Landmark studies, conducted in the early 1960's by Richard Braddock, Richard Lloyd Jones, and Lowell Schoer, suggest that teaching formal grammar through direct and sustained instruction of language categories, functions, and rules using definitions, drills, and exercises (Noguchi, 1991), does not elevate the quality of student writing and may even have a deleterious effect, specifically because it takes significant time away from writing instruction and practice (Glenn, 1995).

In response to this finding, the language arts trivium was effectively dismantled, and grammar instruction was isolated from that of writing. This practice has been endorsed by the notion that grammar is an element of the product rather than the process and has no place in the inventive environment writing process pedagogy strives to create.

However, there is a growing body of evidence confirming the old belief that grammar is best learned in the context of student writing, not apart from it. A large body of recent research concludes that excluding grammar instruction from the teaching of composition is a mistake (Glenn, 1995).

I disagree with the notion that grammar taught out of context is useless, and this seems to me to be just one more extreme reaction. I think we need to be patient with adult students as they attempt to unlearn deeply rooted poor grammar habits, and I think we can help them undo faulty imprinting by providing a variety of learning strategies for the process-

ing of similar information. Repetition can improve retention if material is presented using techniques that are variable enough to discourage downshifting and boredom.

What I observe in students who work on grammar exercises in the PLATO Lab is a measure of corresponding improvement in written work, along with the obvious sense of relief that comes with being admitted into what has previously appeared to be a private club.

"Wow! I never knew there was a rule for that," is the amazed comment I hear repeatedly from students when they discover the magic of grammar.

Out-of-context grammar practice has its place, but it is not enough and should not replace classroom instruction. Applied linguists have demonstrated that grammar is best taught at the point of need—that place in the writing process where it can be of use to the writer because it provides tools the writer can use to identify and remedy problems in their own work (Ross, 1995). Working with error in the context of their own writing, students gain control over their language, their view of grammatical tools, and their writing (Glover & Stay, 1988).

The most obvious problem associated with providing in-class grammar instruction is that it takes valuable time away from the teaching of other process writing skills. The trick is to provide focused instruction in areas of apparent need without 1) suffocating students' creative impulses with anxiety about correctness, and 2) displacing inordinate amounts of writing process instruction time in the interest of building grammar skills that are not immediately relevant to the craft of writing at the Freshman English level.

It would be absurd to attempt to teach grammar in a composition class by beginning with the parts of speech and moving forward through sentence structuring rules; there is simply too much material to cover, and there's no point in spending time presenting information students might never need in order to improve their writing. Early research combined with more recent investigation suggests the need to develop a model for teaching a less cumbersome and less time-consuming writers' grammar, using strategies for learning that have proven to be both efficient and effective.

In my experience, student receptivity to grammar instruction is most apparent at times of frustration. There's no point in lecturing about subject-verb agreement to students who are not struggling with this in their writing. When students have passed in a revision or two and had them

returned with notations about faulty subject-verb agreement, they want to know what to do about the problem, and this is when they become receptive.

I spend less time on grammar at the start of a semester than toward the end, because students are overwhelmed during the early weeks, when they must sort out the various rhetorical modes, develop a familiarity with the essay genre, and begin the difficult process of locating meaningful personal stories. As we move further into the semester, however, and the word revision no longer evokes pained expressions of dread, students begin to ask questions about grammar and usage, as it applies to their writing.

"There's something funny about that sentence," someone might comment about another person's work. "It sounds a little off."

"What do you think is making it sound that way?" I might ask. If no one seems to know, I write the sentence on the board and show them what's making it ring less than true, and I encourage student participation in the explanation whenever I see a light go on in someone's eyes. Twenty minutes later, students have learned a rule they can apply directly to their writing.

Arguments in favor of collaborative learning state that people gain certain kinds of knowledge, including knowledge involving judgment, best through communication with peers in a collaborative setting (Sills, 1988). Careful observation of students engaged in the collaborative process has given rise to the theory that collaboration works best when students are asked to solve a real problem (Gilles, 1988).

If I'm seeing a similar problem in many papers, and no one asks about it in class, I'll bring it to the workshop myself. "Here's a little grammar joke," I might say. "Each pronoun should agree with their antecedent."

Blank stares. No laughter.

"Who gets it?" I probe.

People stare at their feet, check their watches.

"So, am I correct in assuming that I'm the only person in the room who knows what the word antecedent means?"

First they glance at one another, then there's a burst of relieved laughter, and, at that point, they are receptive. Embarrassment about lack of skill is reduced by this group dynamic, and students begin to abandon their isolation.

My students are required to buy and use Diana Hacker's, A Writers Reference, so I tell them to open to a particular page in that book, and we spend twenty minutes talking about pronoun-antecedent agreement. I make it a point to tell them not to worry about remembering the word antecedent; it's not important. All they need to remember is that if a pronoun is singular, the word it refers to must also be singular, and so forth. Since the need for grammatical agreement is a recurring theme in the study of writing, this lesson opens a door to further learning.

It takes relatively little time to teach such simple rules to a class of adults, and it's time well-spent—beyond the obvious benefit of cultivating the growth of immediately applicable knowledge. It allows students to see that if they are confused, it's likely their classmates are, as well, and thus it promotes honest, open questioning in the workshop. It also allows students who learn quickly to help those who have trouble comprehending new rules. We stay with it until everyone understands, and bonds develop among writers during this process.

I provide one-on-one grammar instruction using an increasingly challenging system of interventions. I mark errors on a student's first paper by naming the error and recording the section of A Writers Reference where the student can find a corresponding rule. I mark and name errors on the second paper and refer the student to A Writers Reference, but I do not indicate a section.

I work progressively in the direction of not naming errors at all, but simply noting them; at this graduated level, the student is responsible for determining what the error is and how to fix it. I reach this point at different times during the semester, depending on individual student progress. I routinely assess each person's ability to succeed and often write notes inviting them to ask for help if they need it. "Do you understand why this is wrong? If you're confused, please see me," I might write, or "This is a tricky one. Let me know if you get lost."

Students are increasingly able and willing to identify errors in their own and their peers' papers as time passes; the process becomes less threatening and more rewarding. Toward the end of the semester, grammar instruction can take up significant class time, as it should. This is not only the point of need, it's the point of greatest frustration, receptivity and readiness to learn, because students are working hard to complete and submit edited final papers.

An ease develops among students when grammar is presented as an intrinsic part of the writing process. Grammar, like prewriting, revision, editing, and self-assessment, is not a monster to be avoided at all costs; it can be taken apart, understood, and applied. Most importantly, students need to be made aware that no one has all the grammar rules sorted out and memorized; any given piece of writing can present a different twist on a problem, and that's why the instructor also carries a grammar reference.

During my brief experience teaching writing, I have observed a hunger for competence, as well as for creative freedom, among students. Students' reflections on composition class often include spontaneous references to the value grammar instruction has had for them.

At the close of this past spring semester, I revised my course evaluation to include a question that directed students to rank a list of twelve items in order of their usefulness in improving writing. Grammar instruction was ranked fourth in importance, preceded by peer response, instructor's written comments, and writing process lectures and handouts.

Writing is like driving: one needs to know the rules in order to navigate a system of roads—or a system of words; it isn't enough simply to have a destination.

I'll close with an instructive passage from Annie Dillard's book, The Writing Life (1989).

> A well-known writer got collared by a university student who asked, "Do you think I could be a writer?"
>
> "Well," the writer said, "I don't know... Do you like sentences?"

REFERENCES

Dillard, A. (1989. The writing life. New York: Harper & Row.

Gilles, C. (1988). The power of collaboration. In J. Golub (Ed.), Focus on collaborative learning: Classroom practices in teaching English, 1988 (p. 29). Urbana, IL: National Council of Teachers of English.

Glenn, C. (1995). When grammar was a language art. In S. Hunter & R. Wallace (Eds.), The place of grammar in writing instruction: Past, present, future. (pp. 9-28). Portsmouth, NH: Boynton/Cook Publishers.

Glover, C. W. & Stay, B. L. (1995). Grammar in the writing center: Opportunities for discovery and change. In S. Hunter & R. Wallace (Eds.), The place of grammar in writing instruction: Past, present, future. (pp. 130-133). Portsmouth, NH: Boynton/Cook Publishers.

Hacker, D. (1995). A writer's reference. Boston: Bedford Books.

Noguchi, R. R. (1991). Grammar and the teaching of writing: Limits and possibilities. Urbana, IL: National Council of Teachers of English.

Ross, G. (1995). The NCTE commission on the English curriculum and teaching the grammar/writing connection. In S. Hunter & R. Wallace (Eds.), The place of grammar in writing instruction: Past, present, future (pp 71-78). Portsmouth, NH: Boynton/Cook Publishers.

Sills, C. K. (1988). Interactive learning in the composition classroom. In J. Golub (Ed.), Focus on collaborative learning: Classroom practices in teaching English, 1988 (p. 21). Urbana, IL: National Council of Teachers of English.

Wallace, R. (1995). Introduction: Reexamining the place of grammar in writing instruction. In S. Hunter & R. Wallace (Eds.), The place of grammar in writing instruction: Past, present, future. (p. 2). Portsmouth, NH: Boynton/Cook Publishers.

What's wrong with writing and what can we do about it right now? (1993). Education Research Report. Office of Research, United States Department of Education. [On-line]. Available: http://www.ed.gov/ pubs/ OR/ResearchRpts /writing.html

LANGUAGE DISABILITY, LITERACY, AND EDUCATION: A CASE STUDY

Marion B. Schafer

Introduction

The Americans with Disabilities Act of 1990 particularly challenges open-access institutions of public education, which must both interpret and apply its principles for all who seek to benefit from their programs. If the institutions err, they risk prosecution. In cases of physical disability, the problems and solutions are relatively clear, but the challenge is more complex in the case of dyslexia and dysgraphia. What happens when the disabilities themselves disqualify an individual seeking to access an educational program? How does an institution determine which "auxiliary aids and services" constitute "reasonable modifications to rules, policies, or practices," including " the removal of... communication ...barriers" (§12131)?

Schools have traditionally used standardized placement tests, which rely heavily upon reading and writing, to measure competence. Even in training programs whose focus is experiential, some standard of literacy must usually be met. While providing "interpreters" for language-impaired individuals might seem as reasonable as providing sign-language interpreters for those with speech and hearing impairments, when an interpreter must both comprehend and produce written language, rather than merely translating from one linguistic mode to another (such as American Sign Language) on behalf of the disabled person, this question arises: Whose literacy is being measured, and how is it being measured?

Indeed, why shouldn't "interpreters" be provided for any individuals for whom reading and writing are difficult, perhaps because of early-language deprivation or incomplete second-language acquisition? And what about those who might prefer simply not to read and write because spoken language is easier? In other words, along the continuum of individual language differences, how does an institution measure and apply "reasonable modifications to rules, policies, or practices"?

Schools must know and acknowledge their own limitations and the limitations of their educational offerings, and they must accurately and honestly assess the reading and writing disabilities of those who wish

to access their programs. They must not allow themselves to be seduced into merely cosmetic compliance with the law by giving an unquestioning nod to the results of standardized tests or accepting payment for specialized services they cannot or will not supply. Although the ways in which the brain processes language are only beginning to be understood, institutions are not justified in sidestepping their responsibilities in assessing and reasonably accommodating the language-disabled population. Neuropsychological assessment and methodology, including analysis of spontaneous language, the psycholinguistic assessment of language, and magnetic resonance imaging, can help institutions determine who can benefit from "reasonable modifications" to literacy requirements and what those modifications ought to be.

A Case Study

R. L. was a right-handed, 21-year-old male who sought and was granted admission to a certificate program. After acceptance, he was given a standardized placement test (ACT-ASSET). To meet the literacy requirement of his program, R. L. was placed in a developmental writing course, whose purpose was to train students to meet exit competencies (Appendix A). In an initial writing sample, he produced four handwritten pages (Appendix B) that corroborated the results of the standardized test. R. L. was introduced to computerized wordprocessing and writing-process techniques as well as more abstract information about format and rhetorical organization. During laboratory sessions, whose focus was practical writing strategies, R. L. often complained that he did not know how to type and that the circumstances of the laboratory setting distracted him. After several weeks, R. L. produced a spontaneous, wordprocessed writing sample (Appendix C) in response to a prompt about the effects of television. He then dropped out of school before discussing its results with his writing instructor.

At the beginning of the next semester, R. L. re-enrolled and was placed again in developmental writing with the same instructor, who by now realized that R. L. had a severe writing disability. Subsequent research, based on previous testing with a variety of traditional, standardized instruments, revealed writing scores at around a third-grade level.

In light of this information, his instructor developed a writing program (Appendix D) to address R. L.'s individual language problems so that he could meet the literacy requirement of his program. The program had three broad goals: to increase his confidence about writing so that

continued practice could occur, to provide wordprocessing experience so that the appearance of his work was conventional, and to introduce him to practical writing strategies which, with increased confidence, he might be able to apply in and beyond the developmental writing course. The fourteen-week program consisted of a series of weekly one-on-one sessions with his instructor, reinforced by weekly, hour-long sessions two days later with peer tutors previously trained by the instructor. Although R. L. initially had trouble attending his appointments on time and keeping track of his assignments, his tutors reinforced the concepts and directives supplied by the instructor, and R. L. was held accountable for accomplishing written goals for each session. At the end of fourteen weeks, R. L. submitted wordprocessed final drafts of several papers he had produced under these conditions, one of which was an assessment of his strengths and weaknesses as a writer (Appendix E). In short, he had begun to use alternative strategies to manage, if not remediate, his language problems.

Preliminary Analysis

Samples of R. L.'s writing were consistent with those of surface dysgraphia, in which the writer relies heavily upon sound-to-spelling conversions. The most dramatic evidence of this was a paragraph he produced about television violence (Appendix C). A comparison with his initial, handwritten sample reveals that many of the same language-problems appear in both the handwritten and wordprocessed samples, suggesting the problem is not merely one of forming letters. Both suggest that his interpretation of auditory signals is not always accurate. For example, in his handwritten sample parents is represented as "paret," while in the wordprocessed sample ain't is "and," their is "tar," and young age is "ungach." In addition, R. L. does not always observe word boundaries, and he omits most punctuation and capitalization that mark sentence boundaries. He observes neither spacing nor indentation conventions.

The handwritten sample, which he initiated four times, suggests that he has a good idea of what he wants to say but is insecure about the process of writing. The second sample (Appendix C) was produced in approximately the same amount of time and under the same conditions as the first but with the help of a wordprocessor, which apparently allowed him more closely to approximate fluent conversation, a relative strength. Although it must be phonologically deciphered, R. L.'s paragraph, read aloud, seems quite fluent: he expresses both insight and

candor in his writing, noting that children imitate what they see on television, supplying specific examples to support his contention, and admitting that he himself cannot break the television habit in order to do his homework. He also writes in a strong voice, and he addresses the reader directly, as if in conversation. All of these characteristics are stylistically desirable.

Because his conversational and social skills had been identified as strengths, an attempt was made to capitalize upon communication skills he already had and to help him transfer them to writing, and he was asked to write about his experiences. During one-on-one sessions with his instructor, R. L. spoke rapidly and tended to confine his oral responses to "Yes," and "OK." He often indicated that he had understood instructions, yet when he was invited to paraphrase them, he asked to have them re-explained. As a result, his tutors were instructed to ask him to explain the written instructions, which he had received several days before, then guide him through each assignment; the process of speaking, handwriting, wordprocessing, and reading aloud, and revising was repeated and reinforced. In addressing relevant errors in R. L.'s written work, the instructor and the tutors consistently pointed out what needed to be done, rather than what had not been done.

After two or three weeks, R. L. seemed to enjoy the socialization of his instructional sessions and tutorials, and his attendance habits improved significantly. He had no difficulty finding topics to write about and within a month had made the transition from writing single, complete sentences to producing, with his tutors' support, reasonably clear, though brief, paragraphs. At the end of the fourteen weeks he was able to reflect in several paragraphs an accurate understanding of the strengths and weaknesses of his writing (Appendix F). In these, he acknowledges that he is good at finding topics to write about but that he is a weak speller who needs help editing so that others can understand his writing.

Neuropsychological Evidence

Although it might be tempting to dismiss R. L.'s writing problems as part of an overall pattern of deficits, a close analysis of his writing samples suggests that many of his difficulties may stem from specific language-processing problems. Having self-disclosed frontal-lobe damage related to past seizures, R.L. consistently produced writing samples that suggest some of the characteristics of frontal-lobe lesions. Eslinger and Grattan (1993) have pointed out that patients with frontal lobe le-

sions fail tasks requiring spontaneous (defined as the ready flow of ideas in response to a question) as opposed to reactive (defined as readiness to adjust cognition and behavior according to context) (p. 18). Indeed, a close examination of R. L.'s writing samples (Appendixes B and C) suggests that R. L. is quite capable of fluent spontaneous thought but that the process of written-language production interferes with his expression in specific ways.

Given the similarity of R. L.'s verbal and performance scores on previous standardized tests, the classical definition of dyslexia, which is typically applied to "a group of individuals of normal or above-average intelligence whose reading, despite adequate educational opportunities, falls well below expected levels of competence" (Ellis,1993, p.104) seems not to fit. However, Njiokiktjien (1993) notes, "Most, but not all [italics added], children with developmental dysphasia do show a discrepancy in their verbal and performance IQ" (p. 210). So although the similarity of R. L.'s two subscores might exclude him from the largest group of developmental dysphasics, his ability to abstract and supply specific examples to support his abstractions suggest that his language difficulties may be masking relative strengths.

Trauner et al. (1993) point out that emotional difficulties often accompany developmental language impairments, and Geschwind (1982) notes that "emotional disturbance can be the result of frustration and stresses resulting from the pressures of everyday life and from the failure to succeed in tasks often regarded as important by others" (p.18), so it is possible that R.L.'s occasional emotional outbursts and attendance problems reflect his frustration at his inability to express his thoughts fluently. Given the complexity of brain structure and function, it is possible that specific language-comprehension areas like the planum temporale, damage to which has been implicated in language processing, and the lateral and medial geniculate nuclei, which are involved in auditory processing (Galaburda, Menard, & Rosen, 1994) may be impaired. Evidence in R. L.'s writing samples (representing ain't as "and" and their as "tar," for example), reinforces this suspicion.

Both handwritten and wordprocessed writing samples indicate problems with processing at the level of the graphemic buffer, where grapheme order, upper and lower case forms, and word boundaries are determined. The handwritten sample represents truly as "true lee" and contains cursive capital letters at the beginnings of words which do not begin

sentences. The wordprocessed sample places each line in the center of the page, perhaps because R. L. had been instructed to center the title of his paragraph. Yet he did not notice or did not care that his entire sample was not conventionally justified. R. L.'s inconsistent production of parents as "parets," "parents," "parenot" and "partes" and thought as "thot" and "thought" indicates that he occasionally accesses the correct representations of the words but does not use visual feedback to achieve consistency. Silvieri et al. (1997) have implicated the cerebellum in defects of visual and proprioceptive feedback in spatial dysgraphia, which may also account for the inconsistent representations of some of R. L.'s handwritten letters (W, for example).

Previous evaluators' recommendations that R. L. would probably learn best in conversational and experiential situations but that his other verbal skills were somewhat weak and probably interfere with his ability to grasp new concepts or quickly understand some abstract principles imply that reading and writing might actually impede R. L.'s educational progress. If that is the case, then perhaps it was unreasonable to expect R. L. to meet the literacy requirement of his program. Yet as Njiokiktjien (1993) points out, "The skills required for speech—articulation, sentence construction, verbal short-term memory, auditory perception, and language comprehension—can exhibit great variation and can influence the entire picture" (p. 211). Since writing, which is parasitic upon speech, is further complicated by the production of graphemes, even more variation can be expected. Even a cursory examination of R.L's preliminary writing samples indicates that there is more to his language-processing problems than previous evaluations had indicated, and his placement in developmental writing should have been based upon more specific language-testing and assessment.

Revised Assessment

Although the initial writing program prepared for R. L. enhanced his confidence and supplied him with computer tools (including spellcheck) that gave his writing a more conventional appearance, it is doubtful whether it improved his ability to write independently in the situations he might encounter in his program. While it is important that he acknowledge rather than attempt to disguise his disabilities as a first step toward managing them, the question remains: What can be done to help R. L. function once he leaves the supportive environment in which this initial training occurred?

Literature about dyslexia (and related dysgraphia) has lamented the absence of formal analysis of brain anatomy and physiology as a basis for remediation. Orton, who is credited with recognizing and naming dyslexia in 1925 after years of observation, fulfilled only two of his goals as a researcher: to study children and to develop remediation strategies. His third, to study brain physiology, was not accomplished in his lifetime because of curtailment of his research funding (Geschwind, 1982, pp. 14-15). More recently, Geschwind (1982) emphasized the necessity of basing remedial strategies "on a much more solid foundation if we understand exactly the location of the difficulty and the properties of the regions that can compensate" (p. 29). Even in studies which have, as Ellis (1993) notes, documented "reasonable progress" based upon systematic instruction, "...it is very difficult to know just what helps and what does not help" (p. 108). The Geschwind-Galaburda hypothesis and subsequent studies have appropriately focused attention on brain anatomy as a promising source of information about developmental dyslexia. Unfortunately, though, the benefits of brain studies have not yet significantly affected the ways in which schools evaluate the language behavior of those whom they purport to educate. And while it is quite common to supply convenient and inexpensive "modifications" such as untimed tests or the use of tape-recorders in managing language impairments, much more can and should be done to help such students maximize their potential. Although the case can be made that the study of developmental dyslexia (and dysgraphia) is still in its infancy, if language is considered a tool that the brain uses to extend its influence into the environment, then it is possible to infer important information about the structure and function of each individual brain by considering the language it produces.

More than a hundred years ago, it was clear that careful observation, record-keeping, and analysis could yield significant insights into the workings of the human brain and their effect upon physiology and behavior. Exner (1881) published a volume containing Brodmann-like diagrams of localized functions of the neocortex after observing more than a thousand patients with neurological disorders. His method consisted of classifying his observations according to what was missing that should have been present and what was present that should not have been, then conducting a percentage analysis of the various data. Similarly, the clinical examination of spontaneously generated writing samples could, in combination with other methods of analysis, help

identify the most effective strategies for managing individual language difficulties. (A sample of such an analysis of R. L.'s work is given in Appendix F.)

Such assessments, however, should be corroborated by information gained from other sources, such as the Psycholinguistic Assessment of Language (Caplan, 1996), which consists of twenty seven subtests that identify specific language deficits at the word and sentence levels, both in speech and in writing. An advantage of this battery is that selected parts can be administered, providing what Caplan (1996) calls "a representative and rational basis for assessing important aspects of language function in anyone..." (p. 425). Likewise, magnetic resonance imaging can provide insight into the workings of the brains of language-impaired students and help educational institutions determine appropriate placement and strategies that fulfill the intent of the Americans With Disabilities Act of 1990. As Caviness, Filipek, & Kennedy (1993) point out,

> The full realization of the potential of magnetic resonance imaging in developmental brain science will reflect the convergent contribution of the state-of-the art behavioral and clinical studies on the one hand and the coordinate application of the technology of anatomic and physiologic analyses on the other. The potential of the coordinate approach is massively greater than the contributions of its component methods and approaches. Only pedestrian achievement is likely to issue from analyses that are not multidisciplinary across behavior and technology and that are not convergent in application. (p. 267)

Conclusion

The case of R. L. suggests that an institution which accepts the responsibility of educating language-disabled students must address many of the same issues a neuropsychologist answers in managing the case of a brain-damaged patient. Geshwind (1982) emphasizes

> "...the ability of the brain to compensate in many instances for many types of disturbances. If we are to take advantage of those compensatory processes and render them maximally effective, it will clearly be on a much more solid foundation if we understand exactly the location of the difficulty and the properties of the regions that can compensate" (p. 27).

Educational strategies for language-impaired students must be based upon accurate and honest assessment which acknowledges the role of brain systems and organization, not only with respect to specific language behaviors but also with respect to the function of the whole individual, including the emotional and behavioral effects of the disability. In modern Western society, which has come to value literacy as a measure of intelligence and competence, language disabilities can exclude those who possess them from the benefits of education. Despite the expense and inconvenience involved, schools must clinically identify and address specific behaviors that will allow such students to be integrated, perhaps for the first time, into a society from which they have been excluded. Regardless of classifications and coding implied by assessments, the resources of neuropsychology should be used to analyze specific language deficits and suggest alternative strategies that will help individuals access programs for which they may or may not be qualified. This is not an undue hardship for schools—it is their job.

Appendix A

Criteria for Exiting Developmental Writing

An essay of at least four paragraphs will meet all of these criteria

_____ show evidence of revision between first and second drafts

_____ introduce a general focus

_____ present specific, relevant examples, reasonably paragraphed

_____ explain or demonstrate how and why the examples are related to the focus

_____ provide logical transitions among the examples

_____ conclude appropriately

and at least six of these:

_____ use standard English

_____ contain no end-mark or capitalization errors

_____ contain no spelling errors (given access to wordprocessor or dictionary)

_____ contain no common homonym errors (*e.g.*, its/ it's; there/their/they're; your/you're; wear/were, does/dose)

_____ contain no apostrophe errors

_____ contain no sentence fragments

_____ contain no run-on sentences

_____ use a variety of sentence structures and appropriate connectors

Appendix B

Initial Writing Sample

("Write about something which you thought was true but turned out not to be.")

First Attempt

when I was a little kid
Wen I was a little kid
I thought my parents were true
I that My paret wer true
ly real parents after
lie My reele paret aftr
a few years cut
a fuw yers
then are not the real truth the
the real truth tha
they were not my real parents
thay wer not My reele Paret
because are we not the
becaus read Way are we not the
are the can my
san am thay tel Mij

Second Attempt

when I was a little kid
Wen I was a little kid
I thought my parents were true lie
I that My Paret wer true lie
really my parents but they
reele Paret My Parits But thay
told me
my then were not real
My thay wer Not My reele
parents
Parents

Third Attempt

I thought it was true
~~I~~ I thought it was true
when I was a kid I always thought
it was true that my parents were
my real parents but they were
not that was at first

Fourth Attempt

this true when I was a little
this true when I was a little
kid I thought my parents
were my parents at first why the
I think they were because when
you are a little kid you dont
know a lot it was not how or why
they just told me they
told me the truth and that was
I was adopted and Matt adopted and
they told me what I learned from
it all was it does not matter who
your parents are
are

Appendix C

Early Wordprocessed Writing Sample

("Write about the effects of television in our society.")

How dus Television affected our society

well you got to know that orete about how it dus but i will tell you her i go you must
woch the nows evernit and you must her how ther was a kid shot bay a gun and it was a
therting yer old but he did not find it on the stret he go it ferum is dads colosit. He sed
look wat I ford it is my dads the boy ses werd you like to play with it like the cops do and
his ferends yes do not were it is not loded but the fers shot the boy terck go his ferend but
it did not kill him. wat Iam saying is you see wat habens if you let you kids woch that
stuff on t.v. you know that lot of the stuff on it and that bab but thar is alot that is you got
to say know to if thay are ate a ungach becaus if you donot thay are going to thing the
stuff thay see on t.v is ok but it is not okthat is way wee got to give them time with out
t.v. But it is not just that you got the pepoly ho like to wach it all night and dont even have
time to go to wark so thay have know mony so thay go to the welfar to get the mony
becaus thay are to lase to go to werk becaus the t.v thay love mor then tar live one
experience I have is like to woch mer t.v then do my homwerk I know that is not good
but I cannot berack the habet to stop my shelf.

Appendix D

Scope and Sequence

Note: Instructions were originally double-spaced and printed in a 14-point font.

For February 4, 1997
1. Get a composition book with bound pages.
2. Write 7 sentences (one each day):
   Who did what? For example. I took a shower this morning.
   or
   What did what? For example. The door would not open.
3. Make sure each sentence has a capital letter at the beginning and a period at the end. Please print, and skip a line between sentences.

For February 11, 1997
1. Rewrite the note you sent as a letter. Use this form.[1]

For March 4, 1997
1. Wordprocess the sentences from your composition book.
2. Wordprocess and sign the letter you wrote.

March 18, 1997
1. Revise the draft of your letter, and use the speilcheck!
2. Wordprocess the seven sentences, as indicated for last week.
3. Continue writing one complete sentence per day in your handwriting in the composition book. Do this for each day for March 4 through March 17.

For March 26, 1997
1. Using as a guide the seven sentences you wrote over the break, write a paragraph in chronological (time) order about what you did over the spring break. Use some of the original sentences if you wish, but you will need to add detail as you go along.
2. Write the paragraph in your own handwriting in the composition book, but write on every other line (skip a line after each line you write on).

For April 2, 1997
1. Wordprocess your paragraph about your vacation visit with Jeffery.
2. Use the speilcheck to correct spelling and typographical errors.
3. Be sure that every sentence has a capital letter at the beginning and a period at the end.
4. Type your name, the class, the date, and the instructor's name in the upper left-hand corner of the draft.
5. Type a title for the paragraph, center it, and capitalize it appropriately. For example,

   What I Did During My Week Off

For April 9, 1997
1. Edit the paragraph about your spring break. Produce a final draft.
2. In your composition book, write the first draft of a paragraph about work study. Describe what the job requires. Give an example of a task that you perform on a regular basis, and explain exactly what you have to do. Explain what you like and dislike about the job and why.

For April 16, 1997
1. Print out the newest draft of your spring-break paragraph, and leave it at my office sometime this week.
2. Wordprocess your paragraph about your work-study job, including the changes we made during our conference.
3. Find a picture (either photograph or painting) which you enjoy looking at. Bring it to your conference.

For April 23, 1997
1. Write about what you see in the picture you have chosen.

For May 5, 1997
1. Write several paragraphs about your strengths and weaknesses as a writer. In one paragraph, explain what you do well, and why. In another, explain what your weaknesses are and how they affect your work. In a third, discuss how you can use this knowledge of both strengths and weaknesses to be successful in writing assignments that you are asked to do in school.
2. Edit the paragraph about your spring break. Produce a final draft.
3. In your composition book, write the first draft of a paragraph about work study. Describe what the job requires. Give an example of a task that you perform on a regular basis, and explain exactly what you have to do. Explain what you like and dislike about the job and why. Wordprocess your draft, using standard manuscript form, including a title. Submit a first draft with your final draft.

[1] R.L. was given an actual letter to use as a model.

Appendix E

Later Wordprocessed Writing Sample

("Write about your strengths and weaknesses as a writer.")

My Strong and Weak Points in Writing.

My strengths are that I can think up topics for many subjects. How does this affect my work? I am able to find these topics in the library and it makes my job easier. One of my strengths is that I'm a quick thinker: This affects my work by cutting the time I spend on a paper down.

One of my weaknesses is that I can not spell very well this weakness makes it hard for me to read my paper done. It is hard for me to put it in words the way I want it to say. Because of my difficulty with spelling, it is hard when someone is reading my work to understand what I am trying to say. Often they have no clue about what I am saying. Sometimes I cant even read my own work to understand what I'm trying to say. It makes my grades not good and not

the way I want them to be.

By working on my spelling and everything else that is not good, with hard work I can make it better. I can get good grades in school, and also go to the lab for extra help. If I get help on all this, I'll be able to do a lot better in this world.

Appendix F

Simple Error Analysis of R.L.'s Third Handwritten Attempt

I thought it was true
~~The~~ I thrught it Nas true
when I was a kid I always thought
Wen I Nas a kid I Ouet thought
it was true that my parents were
it Nas true that my Parts Wee
my real parents but they were
My reele Parts but they Wer
not That was at first
~~Ih~~ Not that Nas at first

Negative Cases	Error Rate	Positive Cases	Error Rate
case omissions That	3% (N=31)	case additions Was Wen My Wee My Wer Not Was	29% (N=31)
period omissions kid. first.	67% (N=31)		
phoneme omissions w(h)en part(e)(n)tes we(r)e par(e)(n)tes o(l)w(ay)s	9% (N=91)	grapheme additions* partes partes	2% (N=91)

*assuming no phonemic correspondence in pronunciation

Note: Phonologically plausible thay and reele have been disregarded here. They would likely be addressed through phonetic retraining once R.L.'s phonological acuity had been assessed. This sample contains no grammatically incomplete sentences. The error rates suggest it might be appropriate to address capitalization and end marks as a first step. While a spellcheck will help address spelling difficulties, more serious problems of phoneme-grapheme conversions could be addressed through phonetic retraining if further testing indicates it might be effective.

REFERENCES

Americans With Disabilities Act of 1990, 42 U.S.C. § 12131 (West 1993).

Caplan, D. (1996) Language: Structures, disorders, and processing. Cambridge, Massachusetts: MIT Press.

Caviness, V. S., Filipek, P.A., & Kennedy, D.N. (1993). The neurobiology of learning disabilities: Potential contributions from magnetic resonance imaging. In A.M. Galaburda (Ed.), Dyslexia and development: Neurobiological aspects of extra-ordinary brains (pp. 257 - 268). Cambridge, Massachusetts: Harvard University Press.

Ellis, A.W. (1993). Reading, writing, and dyslexia: A cognitive analysis. Hove, UK: Lawrence Erlbaum Associates.

Eslinger, P. J. & Grattan, L.M. (1993). Frontal lobe and frontal-striatal substrates for different forms of human cognitive flexibility. Neuropsychologia 31, 17 - 28.

Exner, S. (1881). Untersuchen uber die localisation der functionen in der grosshirnrinde des menschen. [Examinations of the localization of function in the human cerebral cortex] Vienna: Wilhelm Braumüller.

Galaburda, A.M., Menard, M.T., & Rosen, G.D. (1994) Evidence for aberrant auditory anatomy in developmental dyslexia. Proceedings of the National Academy of Sciences, USA, 91, 8010-8012.

Geshwind, N. (1982) Why Orton was right. Annals of Dyslexia 32, 13-30.

Njiokiktjien, C. (1993). Neurological arguments for a joint developmental dysphasia dyslexia syndrome. In A.M. Galaburda (Ed.), Dyslexia and development: Neurobiological aspects of extra-ordinary brains (pp. 205 - 236). Cambridge, Massachusetts: Harvard University Press.

Silvieri, M. et. al. (1997). Spatial dysgraphia and cerebellar lesions. Neurology 48, 1529-1532.

AUTHORS

Mary Boyle
NHCTC – Claremont
(603) 542-7744
m_boyle@pste.tec.nh.us

Laurie Clute
NHCTC – Claremont
(603) 542-7744
l_clute@pste.tec.nh.us

Sandra Cole
NHCTC – Claremont
(603) 542-7744
s_cole@pste.tec.nh.us

Greg Eddy
NHCTC – Claremont
(603) 542-7744
geddy@srnet.com

Anita French
NHCTC – Stratham
(603) 778-1194
afrench@ttlc.net

Joan Holcombe Larsen
NHCTC – Claremont
(603) 542-7744
j_larsen@pste.tec.nh.us

Nancy Marashio
NHCTC – Claremont
(603) 542-7744
n_marash@pste.tec.nh.us

Paul Marashio
NHCTC – Claremont
(603) 542-7744
p_marash@pste.tec.nh.us

Joe Perron
NHCTC – Claremont
(603) 542-7744
j_perron@pste.tec.nh.us

Nancy Roy
NHCTC – Claremont
(603) 542-7744
n_roy@pste.tec.nh.us

Marion Schafer
NHCTC – Berlin
(603) 752-1113
m_schafe@pste.tec.nh.us

Susan Welsh
NH Community College System
(603) 542-7744
s_wlsh@pste.tech.nh.us

Jane Whittington
NHCTC – Claremont
(603) 542-7744
j_whitti@pste.tec.nh.us

Diana Wyman
NHCTC – Claremont
(603) 542-7744
d_wyman@pste.tec.nh.us

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

ERIC®

JC980401

REPRODUCTION RELEASE

(Specific Document)

I. DOCUMENT IDENTIFICATION:

Title: PEDAGOGY JOURNAL	
Author(s): PEDAGOGY COMMITTEE	
Corporate Source: N.H. COMMUNITY TECHNICAL COLLEGE SYSTEM 5 INSTITUTE DR., CONCORD NH 03301	Publication Date: 10/98

II. REPRODUCTION RELEASE:

In order to disseminate as widely as possible timely and significant materials of interest to the educational community, documents announced in the monthly abstract journal of the ERIC system, *Resources in Education* (RIE), are usually made available to users in microfiche, reproduced paper copy, and electronic media, and sold through the ERIC Document Reproduction Service (EDRS). Credit is given to the source of each document, and, if reproduction release is granted, one of the following notices is affixed to the document.

If permission is granted to reproduce and disseminate the identified document, please CHECK ONE of the following three options and sign at the bottom of the page.

02

The sample sticker shown below will be affixed to all Level 1 documents	The sample sticker shown below will be affixed to all Level 2A documents	The sample sticker shown below will be affixed to all Level 2B documents
PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY Sample TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) 1	PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE, AND IN ELECTRONIC MEDIA FOR ERIC COLLECTION SUBSCRIBERS ONLY, HAS BEEN GRANTED BY Sample TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) 2A	PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY Sample TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) 2B
Level 1 ☒	Level 2A ☐	Level 2B ☐
Check here for Level 1 release, permitting reproduction and dissemination in microfiche or other ERIC archival media (e.g., electronic) and paper copy.	Check here for Level 2A release, permitting reproduction and dissemination in microfiche and in electronic media for ERIC archival collection subscribers only	Check here for Level 2B release, permitting reproduction and dissemination in microfiche only

Documents will be processed as indicated provided reproduction quality permits.
If permission to reproduce is granted, but no box is checked, documents will be processed at Level 1.

I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce and disseminate this document as indicated above. Reproduction from the ERIC microfiche or electronic media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries.

Sign here, please	Signature: Marie Anne Mills	Printed Name/Position/Title: ADMIN ASSISTANT
	Organization/Address: NH COMMUNITY TECHNICAL COLLEGE SYSTEM 5 INSTITUTE DR. CONCORD NH 03301	Telephone: (603) 271-2062 FAX: (603) 271-2725 E-Mail Address: m_mills@tec.nh.us Date: 10-14-98

(over)